



TRINA

BIOREACTIVES



BIOMATERIALS

YOUR SWISS REFERENCE PARTNER FOR CUSTOMIZED IVD AND PHARMA BULK MATERIALS.

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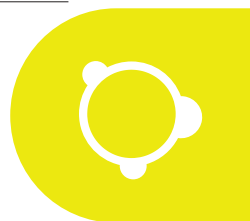
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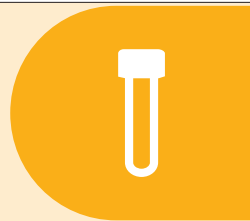
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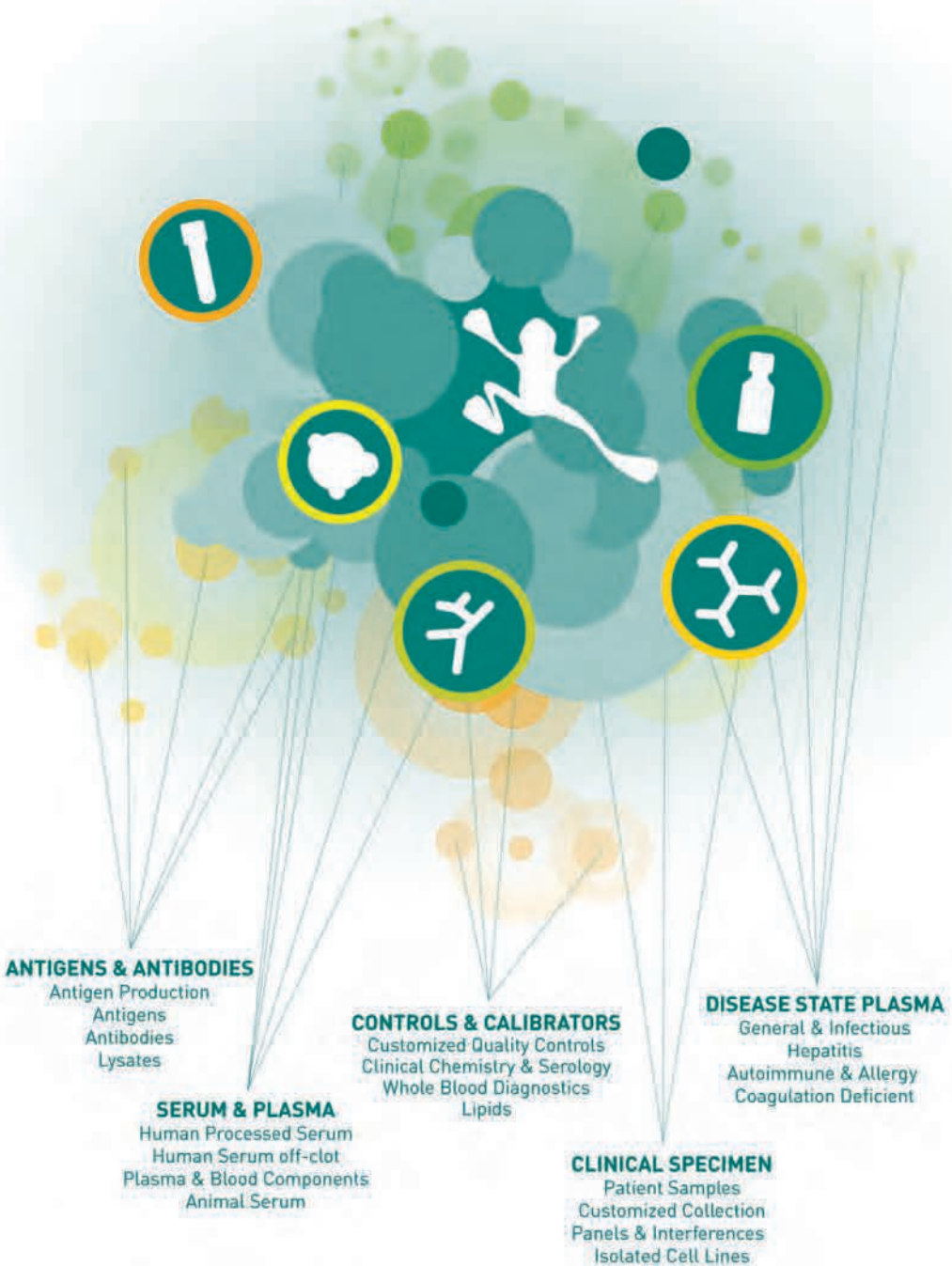
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ABOUT TRINA



The global leaders in IVD manufacturing trust us to be part of their supply chain and to support them on sourcing decisions and planning. From everyday details to multiyear planning we are always there for you to find a solution.

Quality is the key to customer satisfaction

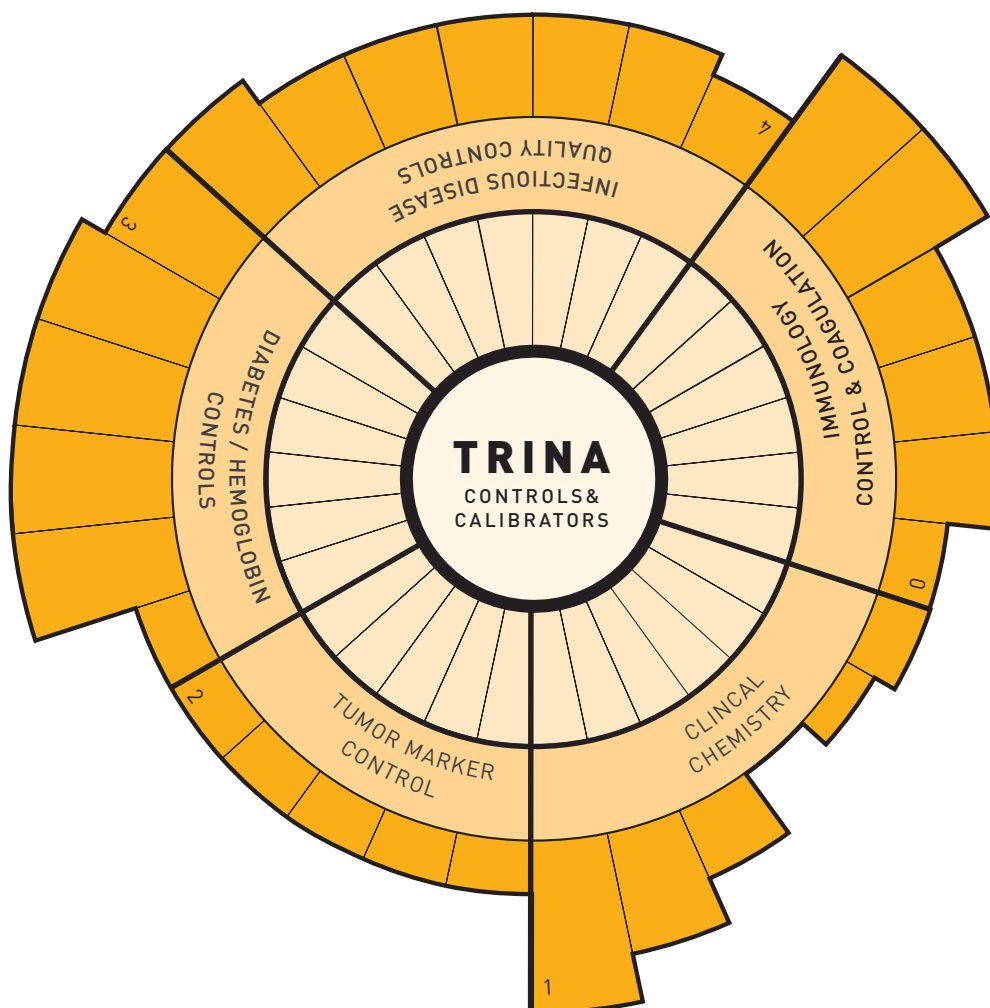
TRINA BIOREACTIVES has grown to well over 25 people and is a motivated team with a strong technical and scientific background.

IVD Biomaterials

TRINA BIOREACTIVES manufactures in Switzerland and through our worldwide network of partners and joint-ventures. We are specialized in customer specified requirements including development, special screening, securing raw materials and testing on specially designed equipment.

Years of working together with diagnostic manufacturers gave TRINA BIOREACTIVES a deep insight in realizing specific material requests. Our team can match customer's requirements with available material. The knowledge and contacts in the market give us the ability to allocate productions at the most competitive price.

Expertise, experience and cultural diversity help us to maintain a long-term strategy and to keep our promise of precision and reliability. We serve our customers in over 40 countries.



ISO 9001:2008 / ISO 13485:2012 certified
Swiss Health Authorities registered (Reg. Nr. 1007779)
Member of the American Association for Clinical Chemistry
Member of the Japan Society of Clinical Chemistry
More than 20 years of experience in the IVD Market

Quality since 1994

TRINA BIOREACTIVES manufactures in Switzerland and through our worldwide network of partners and joint-ventures. We are specialized in customer specified requirements including development, special screening, securing raw materials and testing on specially designed equipment.

- Meeting the customer's specifications and production schedules
- On Demand Business – more than 95% of TRINA's business is specific to customer's production and R&D.
- Core Project Management, including validation, stability and sustainability of supply chains.

Storage / Procurement

- Large storage capacity at +4°C / -20°C / -80°C / -196°C
- Customized production, bottling, labelling and shipping
- Consistent quality management and control



Product application & modification stream

Base level

Serum off-the Clot	SN0200	donor selection
K3EDTA Plasma, single	NP0992	serum / plasma matrix
anti-HBs negative Source Plasma	NP0201	custom screening
HAV IgM positive	DH1102	serology testing
Male Human Serum	SN0300	pooling

Processed level

Basematrix, Male only	SP1819	defibrination
trinaBase® II – zero base	SP1831	lipid stripping
IgE free	SP1844	dialyze
Processed, all Hep. negative Serum	SP1905	dextrane stripping
Enzyme free	SP1840	diafiltration
trinaBase® II	SP1811	analyte adjusting
anti-HCV positive, inactivated	DH1301	heat inactivation
T3/T4 free Serum	SP1842	heavy charcoal stripping
Copper/Zinc free Serum	SP0900	resin stripping
Ferritin free Plasma	SP1836	affinity stripping
RF positive Diluent	DA1708	cascade filtering, 0.2 µm

Control level

SS-A Antigen	A1814	level adjustment, spiking,
HBsAg AD	A0835	recovery & regeneration
CK-MB Control	CD3110	proprietary stabilization,
TC/TG/HDL/LDL Calibrator	CL1130	cryoprotectants & antioxidants
Toxo IgM Control	DM1902	custom validation / analysis
EBNA IgA Calibrator	DV1058	custom filling
CMV IgM QC Controls	DV1052	lyophilized
K3EDTA/ Serum matched Samples	NM0800	2 ml aliquot, custom-label, box

当社TRINA BIOREACTIVES AGは、スイスに本社を有し1994年創業以来、体外診断薬等に関するバイオロジー及びバイオテクノロジーの原材料及び中間原材料の供給に努め、また、日本を含める世界の主な体外診断薬製造メーカー、研究所等のお得意様からも高い評価をいただいております。

事業内容

体外診断薬 製造原料

製造に必要なバイオリジカル原料を日本の主な製造メーカーに提供しております。

原料の品質は体外診断薬のパフォーマンスに結びつく為、メーカー担当者との重なるバリデーションプロセスを基に、最先端の製造技術・QC技術を導入し、世界的に高く評価される品質を実現しております。

お客様の要求に対するソリューションを重視しており、その為、カタログ品以外にもカスタムスペックで提供する原料が豊富です。

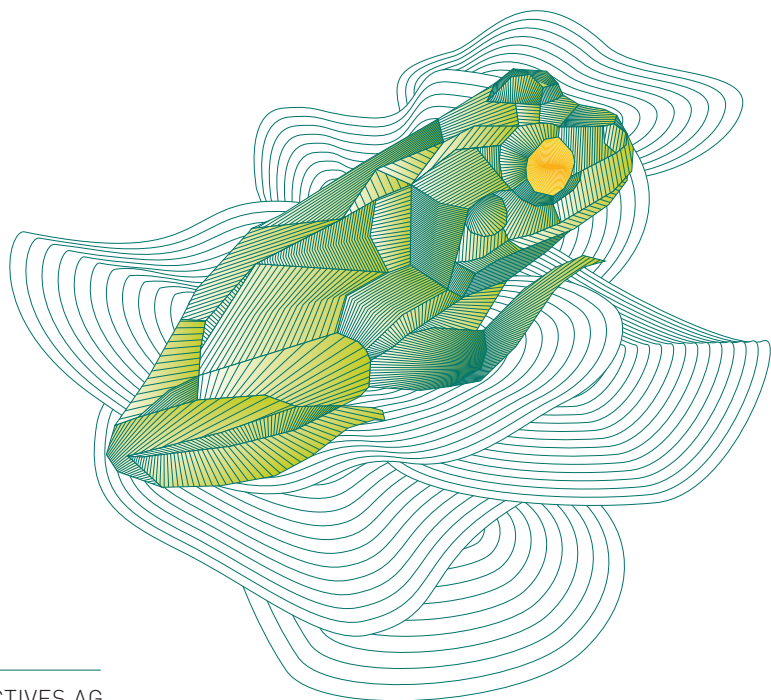
体外診断薬 研究開発材料

研究開発に必要なバイオリジカル材料・検体を主な製造メーカーの開発部に提供しております。

要求されるスピード、情報量、マテリアルの正確さに関して御好評頂いております。

体外診断薬 付随サービス用材料

社内・社外目的のコントロール、キャリブレーター、サーベイ試料をお客様のカスタム依頼に基づいて、受託製造しております。



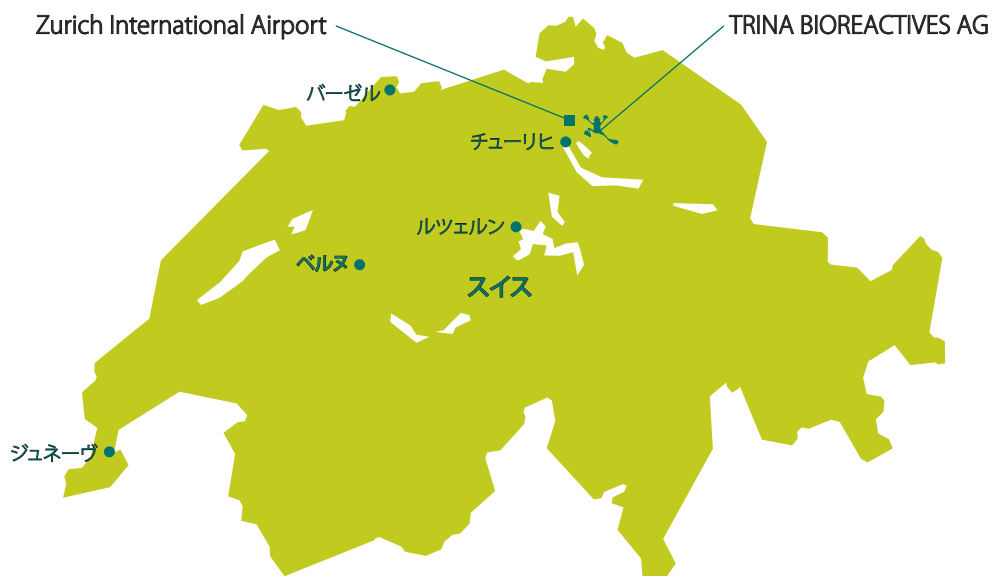


製品&サービス

血清・血漿	人加工血清(ベース血清) 脱脂血清、チャコール処理血清、ホルモンフリー血清、等 天然血清(オフクロット血清) ドナー別、プール、追加項目試験、等 血漿、その他の全血液由来品 抗凝固剤指定、赤血球、白血球、等 動物血清
疾患／特殊人血漿	肝炎 自己免疫疾患、アレルギー 凝固疾患
クリニカル検体	マーカー別 疾患別、受注採血
抗原・抗体	精製抗原(天然・リコンビナント) 特殊抗体
OEMキャリブレーター &コントロール	カスタマイズQC用 脂質用 臨床化学、免疫用 全血液用

会社概要

商号	TRINA BIOREACTIVES AG
会社種類	株式会社(非公開)
支社	イタリア、日本、アメリカ合衆国
主な顧客	主な体外診断薬メーカー(全世界で約110顧客、大・中企業)
従業員数	15人+ 30人(パートナー製造)
ISO認定	ISO 9001, ISO13485, ISO14001
本社住所	Grabenstrasse 8, 8606 Naenikon, Switzerland
電話(代表)	(国番号41) - 44 905 20 10
電話(日本営業直通)	(国番号41) - 44 942 38 64
電話(日本営業直通)	03-4580-2965 (日本の電話番号にお掛け頂くと、自動的にスイス本社の日本語直通電話に繋がります。電話料金は、日本国内通話料金のみです。)
ファックス	(国番号41) - 44 905 20 11
Email(代表)	trina@trinabio.com (英語)
Email(日本営業直通)	trina@alles.or.jp (日本語)
Web	www.trinabio.com (日本語のページも御座います。)
弊社営業時間	スイス時間8:00 - 17:00





製品お問い合わせから御購入までの流れ

1. 初めての御客様は日本営業担当者までEmail、御電話、ファックスで御連絡下さい。至急、弊社カタログを御送り致します。
2. 又、カタログに載っていない製品も御座いますので、もし御探しの製品がカタログに見つからない場合、直接お問合せ下さい。
3. 御興味の製品がお決まりでしたら、スペック、必要量、事前評価サンプルの要・不要、予算等を御知らせ下さい。
4. 御見積り提出→価格ok確認
5. (事前評価サンプルが必要な場合) サンプル評価: ロットホールドの期間は一ヶ月となっております。
6. 御購入

発送ロジスティクス

スイス→日本

FedEx、近鉄エクスプレスか日本通運にて月曜日(木曜日到着)か金曜日(月曜日到着)発送致します。 弊社は、スイス・チューリッヒ空港から15分の便宜の良い場所に位置しております。

取引形態

基本的に、TRINA BIOREACTIVES AGとの直接取引の形態を御願っております。日本向け営業部門を本社と統一致しましたので、日本営業担当(日本人)はスイス本社に在籍しております。

日本支社は、現在、事務作業のみとなっております。

トリナ・バイオリアクティブス日本支社からの国内取引は、場合に応じて対応致します。

よくあるご質問

「製品の価格リストはありませんか？」

→ 価格は、製品のスペック、購入量によって変化致しますので、御話を伺ってからの御見積もり提出となります。

「トリナはISOに認定されていますか？」

→ 1996年よりISO9000を、2001年にISO9001:2000を、2006年にISO13485:2003を認定されました。

「日本でどなたか御問い合わせに対応してくれる人はいますか？」

→ トリナ・バイオリアクティブス日本支社がまだ登録されており、事務の担当者がいますので、もし、何か緊急の場合は、日本時間午前9時から午後5時まで連絡が付きます。 下記に、トリナの件で御問い合わせ下さい。 スイス本社の日本営業担当者に至急連絡が届くシステムになっております。ただ、日本支社に営業職員はいませんので、通常は、スイス本社の日本営業担当者(日本人)にEmailで御問い合わせ下さい。

トリナ・バイオリアクティブス日本支社 (CH プロジェクトマネジメント社内)

〒100-0014 東京都 千代田区 永田町 2-17-8

Tel: 03-3503-5628 (もしくは、03-3503-1571)

Fax: 03-3503-1575

「海外から日本への発送で多少不安なのですが、」

→ 弊社サイドで、発送から御社到着までフォローアップを致しますので、御安心下さい。基本的に、小さな荷物の場合はFedExで、大きな荷物は日本通運又は近鉄エクスプレスにてお送り致します。どちらの種類の発送も、お客様のお手元に3日程で届くシステムになっております。又、ドライアイスの量の調節、梱包の大きさ等、お客様の要望を細かくケアするサービスをおこなっております。



日本向けに売られている製品

trinaBase® (トリナベース血清) / Processed human serum (加工血清)

- コントロール用ヒト加工血清 (バルク単位: 50, 100, 200, 300リットル等): 血漿由来
- 脱フィブリン、脱脂、透析、チャコール処理、滅菌フィルター済み血漿
- 処理方法 (脱フィブリン、脱脂、透析)、生化学項目の値合わせ、OEMラベル等
- 会社全体で、年間約 20,000リットル程販売されております。

Normal Human Serum, Native off the clot (健常者ヒト血清、ナチュラル)

- ドナー採血別、プール、小分け等、顧客のカスタム依頼にお答え出来ます。
- HBs抗体陰性、HTLV I/II陰性の確認された製品もご用意出来ます。
- 会社全体で、年間約8,000リットル販売されております。

Liquid Calibrator (液状キャリブレーター) / Liquid Control (液状コントロール)

- 生化学項目、免疫項目、癌マーカー項目等の高値コントロール用の液状キャリブレーター・コントロールをカスタム製造致します。

Disease State / Specialty Plasma (疾患／特殊血漿)

- 特定の疾患、もしくは、特定項目が異常値のドナーからの血漿となります。
- 製品によっては、特性ドナーの確保等、製造用バルクに向けた安定供給が期待出来ます。

Antigen (抗原)

- お客様の御要望により、様々な製造用バルク抗原の御提供を行います。
- 長年の経験により、より良い品質の抗原をお客様のお手元まで安心してお届け致します。

Monoclonal / Polyclonal Antibody (モノクロ/ポリクロ抗体)

- お客様の御要望により、様々な製造用バルク抗原の御提供を行います。
- お客様のスペックによりカスタム製造が可能です。



SERUM AND PLASMA



1 SERUM AND PLASMA | HUMAN PROCESSED SERUM

clinical | controls | calibrators | panels | proficiency testing

Bulk Serum Processing

Matrix

plasma | serum | CPD | sodium citrate

• Screening	• Raw Material Qualification
• Analyte Titer	• Matrix Selection

Process

serum | customizing

• Filter Method	• Processing Method
• Buffer	• Defibrination
• Antimicrobial / Antifungal	• Delipidation
• Proprietary Stabilization	• Dialyse
• Heat Treatments	• Level Adjustment

Custom

controls | calibration | proficiency testing | panels

• Natural Enzyme Immobilization	• Stability Data • Vial Selection	• Additives for Lyophilization / Liquid Stability • Cryoprotectants
• Protease Inhibitors	• Additives / Antioxidants	

Application

Research	IVD Manufacturing	Clinical Labs
• 500 Donor Panels • Aliquot Volumes	• 10L – 1000L Batches • Supply chain setup • Bulk packaging & Storage	• Customized Controls • 0.5 – 50 ml Aliquots

1 SERUM AND PLASMA | HUMAN PROCESSED SERUM

basematrix | negative matrix | processed plasma

Processed Serum, Plasma and TRINABase® as well as **Basematrix** products are available with different chemical profiles, obtained through high-tech procedures and are supplied specially adapted to customer's requirements.

All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive, unless otherwise specified.

Customized Processed Serum

During the 20 years of experience with our production partners, hundreds of different types of processed human Serum and Plasma have successfully been manufactured to customer's satisfaction.

Batch sizes range between 100 ml up to 1'000 l of one homogeneous lot.

Screening for special parameters with customer defined equipment and reagents is coordinated and monitored at TRINA BIOREACTIVES. Tests are done in Switzerland as well as in the USA by contracted laboratories, universities and institutes.

Code	Specificity	Form
SP0520	anti-HAV neg	defibrinated
SP0521	anti-HAV neg	delipidized
SP0830	Human Serum, anti-HBs neg.	defibrinated
SP0835	NHS, anti-HIV negative	defibrinated
SP0855	Steroid free	defibrinated
SP1839	Ig free (A, G, M, E)	defibrinated
SP1846	IgG free	delipidized
SP1847	Insulin free	delipidized
SP1848	Heavy charcoal stripped	delipidized
SP1850	Estradiol (E2) free	delipidized
SP1855	Steroid free	delipidized
SP1904	All Hepatitis free	defibrinated
SP1907	Aldosterone free	delipidized
SP1810	ASO / IgG Specification	delipidized
SP1837	Tg and anti-Tg free	delipidized



Code	Specificity	Form
SP1840	Enzyme free	defibrinated
SP1842	T3 / T4 free	delipidized
SP1843	Free of LH / FSH	defibrinated
SP1845	TSH free	defibrinated
SP1851	E2 free, affinity stripped	delipidized
SP1853	Testosterone & Progesterone free	delipidized
SP1856	anti-TP negative	delipidized
SP1860	RPR free	delipidized
SP1861	D-Dimer free	delipidized
SP1864	UIBC / Iron spec.	delipidized
SP1969	B12 free	defibrinated

Affinity / Resin stripped Serum

TRINA BIOREACTIVES is specialized in customized antibody affinity and resin stripped sera. All products are 0.2 µm final filtered and bottled upon your request. Nearly any marker can be stripped to a zero level with affinity or resin stripping.

Code	Specificity	Form
SP1605	Vitamin D stripped	delipidized
SP1610	Folate stripped	delipidized
SP1701	Protein S affinity stripped	delipidized
SP1712	IgE / Allergy stripped	delipidized
SP1747	Insuline free, resin stripped	delipidized
SP1836A	Ferritin, affinity stripped	delipidized
SP1844	IgE free	delipidized
SP1845-A	TSH affinity stripped	delipidized
SP1846	IgG free	delipidized
SP1849	β-2-M free	delipidized
SP1854	AFP free, affinity stripped	delipidized
SP1857	Cortisol stripped	delipidized
SP1858	CEA affinity stripped	delipidized
SP1859	CA 19-9 affinity stripped	delipidized
SP1864	CA125 affinity stripped	delipidized
SP1865	CA15-3 affinity stripped	delipidized

1 SERUM AND PLASMA | HUMAN PROCESSED SERUM

basematrix | negative matrix | processed plasma

Human Processed Serum is available with different chemical profiles, obtained through high-tech procedures and are supplied specially adapted to customer's requirements.

All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive, unless otherwise specified.

TRINABase®

Code	Specificity	Form
SN0800	trinaBase® II-CN (off clot)	pooled, sterile
SN0801	trinaBase® A (off clot)	pooled, sterile
SP0810	trinaBase® I	defibrinated
SP0812	trinaBase® I-D (D-Dimer reduced)	defibrinated
SP0850	trinaBase® III (analytes adjusted, stabilized)	defibrinated
SP1811	trinaBase® II	delipidized
SP1812	trinaBase® II-D (D-Dimer free)	delipidized
SP1815	trinaBase® II-CS (charcoal stripped)	delipidized
SP1830	trinaBase® II-Molec. (DNase, RNase, Protease inactive)	delipidized
SP1831	trinaBase® II-zero base (zero base, charcoal)	delipidized
SP1832	trinaBase® II-A (analyte free, affinity stripped)	delipidized

Basematrix

Code	Specificity	Form
SP0820	Basematrix anti-HBs negative	defibrinated
SP0900	Basematrix Customer Specification	defibrinated
SP0910	Basematrix Customer Specification	heat inactivated
SP1718	Basematrix Female only	defibrinated
SP1719	Basematrix Female only	delipidized
SP1819	Basematrix Male only	defibrinated
SP1820	Basematrix anti-HBs negative	delipidized
SP1823	Basematrix anti-HBs negative (dextran sulfate)	delipidized
SP1829	Basematrix Male only	delipidized
SP1900	Basematrix Customer Specification	delipidized
SP1904	Basematrix all Hepatitis negative	defibrinated
SP1905	Basematrix all Hepatitis negative	delipidized
SP1906	Basematrix all Hepatitis & TP negative	defibrinated
SP1907	Basematrix all Hepatitis & TP negative	delipidized



1 SERUM AND PLASMA | HUMAN SERUM OFF-CLOT

human serum | NHS | off-the-clot | true serum | OTC

Special testing and screening upon customer's request.
TRINA BIOREACTIVES can access most testing systems and reagents through our partner laboratory network.

Standard

Code	Specificity	Form
SN0100	Standard, non gender specific	pooled
SN0200	Standard, non gender specific	single donation
SN0205	Flash frozen	single donation
SN0300	Male only	pooled
SN0301	Male only	single donation
SN0400	Female only	pooled
SN0401	Female only	single donation

Hepatitis anti-HBs negative

Code	Specificity	Form
SN0110	Standard, non gender specific	pooled
SN0210	Standard, non gender specific	single donation
SN0310	Male only	pooled
SN0311	Male only	single donation
SN0410	Female only	pooled
SN0411	Female only	single donation

Hepatitis anti-HBc negative

Code	Specificity	Form
SN0120	Standard, non gender specific	pooled
SN0220	Standard, non gender specific	single donation
SN0320	Male only	pooled
SN0321	Male only	single donation
SN0420	Female only	pooled
SN0421	Female only	single donation



All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive.

Hepatitis anti-HBs and anti-HBc negative

Code	Specificity	Form
SN0130	Standard, non gender specific	pooled
SN0230	Standard, non gender specific	single donation
SN0330	Male only	pooled
SN0331	Male only	single donation
SN0430	Female only	pooled
SN0431	Female only	single donation

Hepatitis anti-HBs / anti-HBc and anti-HTLV-I / II

Code	Specificity	Form
SN1130	Standard, non gender specific	pooled
SN1230	Standard, non gender specific	single donation
SN1330	Male only	pooled
SN1331	Male only	single donation
SN1430	Female only	pooled
SN1431	Female only	single donation

Hepatitis anti-HAV negative

Code	Specificity	Form
SN1120	Standard, non gender specific	single donation
SN1121	Standard, non gender specific	pooled

1 SERUM AND PLASMA | PLASMA & BLOOD COMPONENTS

source plasma | plasmapheresis | custom matrix

All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive.

Human Plasma

Code	Specificity	Form
NP0130	anti-HBs negative source	single
NP0210	anti-HBs negative source, customized	single
NP0230	anti-HBs & anti-HBc negative source	single
NP1201	anti-HTLV I/II negative source	single
NP1230	anti-HBs & anti-HBc & anti-HTLV- I/II neg. source	single

Custom Anticoagulants

Code	Specificity	Form
NP0100	Normal Plasma, CDP-A	single
NP0101	Normal Plasma, CDP-A	pooled
NP0110	ACDA Plasma	single
NP0200	Normal Plasma, Citrate	single
NP0201	Normal Plasma, Citrate	pooled
NP0300	Normal Plasma CPD	single
NP0301	Normal Plasma CPD	pooled
NP0400	Normal Plasma CP2D	single
NP0401	Normal Plasma CP2D	pooled
NP0990	Normal Plasma, Lithium Heparin	single
NP0992	Normal Plasma, K3 EDTA	single
NP0993	Normal Plasma, K2 EDTA	single
NP0994	Normal Plasma, Na2 EDTA	single
NP0995	Normal Plasma, Sodium Heparin	single
NP0998	Normal Plasma Sodium Fluoride	single
NP1990	Normal Plasma, Lithium Heparin	pooled
NP1992	Normal Plasma, K3 EDTA	pooled
NP1993	Normal Plasma, K2 EDTA	pooled
NP1995	Normal Plasma, Sodium Heparin	pooled
SN0992	K3 EDTA Whole Blood	liquid



Matched Sets

Code	Specificity	Form
NM0800	K3 EDTA & Serum	single donor
NM0801	K2 EDTA & Serum	single donor

Human Whole Blood & Blood Components

Code	Specificity	Form
SN0001	Whole Blood	single
SN0010	Erythrocyte Concentrate	single, pooled
NP0020	Red Blood Cells (Na ₂ EDTA)	single, pooled
SN0050	Buffy Coats	single
SN0060	SAG-M Red Cells concentrate	liquid
SN0070	Red Cell Concentrate	single
SN0180	Cord blood	single

Any customer given or defined anti-coagulants can be added upon special requirement.

Materials will be aliquoted and labeled according to customer's demand and specification.

1 SERUM AND PLASMA | ANIMAL SERUM & GROWTH MEDIA

goat | bovine | sheep

Serum originates from virus free closed donor herds, with a minimal batch to batch variation. TRINA BIOREACTIVES has a large expertise in animal specialities, please ask our team for advice.

Upon request the animal sera is 0.2 μ filtered and gamma-irradiated. Raw serum is unfiltered. Pack size is made to fit customer specifications.

The animal sera are derived from healthy animals as determined by clinical examination of a registered veterinary. Each product is supplied with appropriate quarantine documentations necessary for the import into each country.



Trinanima® Animal Serum

Code	Specificity	Form
TP0200	Plasma Diagnostic Base, bovine	0.2 µm filtered
TP0210	Plasma Diagnostic Base special, bovine	0.2 µm filtered
TP0300	Adult Bovine Donor (virus free)	unfiltered
TP0430	Donor Calf (virus free), bovine	unfiltered
TP0500	Donor Horse (virus free)	unfiltered
TP0700	Donor Goat (virus free)	unfiltered
TP1200	Mouse Serum	0.2 µm filtered
TP1201	Mouse Plasma, EDTA Plasma	unfiltered
TP1300	Adult Bovine Donor (virus free), bovine	0.2 µm filtered
TP1315	Adult Bovine Serum Gamma free, bovine	0.2 µm filtered
TP1396	Donor Bovine Serum, delip Aerosil, bovine	0.2 µm filtered
TP1430	Donor Calf (virus free), bovine	0.2 µm filtered
TP1500	Donor Horse (virus free)	0.2 µm filtered
TP1590	Horse Serum, decomplexed	liquid
TP1700	Donor Goat (virus free)	0.2 µm filtered
TP1780	Rat Serum	unfiltered
TP1781	Rat Plasma, EDTA Plasma	unfiltered
TP1783	Rat Plasma, Na-Citrate Plasma	unfiltered
TP1790	Rat Serum, heat inactivated	decomplexed.
TP1800	Sheep Serum	unfiltered
TP1801	Sheep Serum	0.2 µm filtered
TP2101	Minipig Plasma, EDTA Plasma	liquid
TP3300	New Born Calf Serum, bovine	0.2 µm filtered
TP4000	Cynomolgus Plasma, EDTA Plasma	unfiltered
TP7700	Guinea pig Serum	raw serum
TP7710	Rabbit Serum	0.2 µm filtered
TP7711	Rabbit Plasma	liquid
TP9102	BSA Cohn Fraction, bovine	powder
TP9102-S	Sulphydryl Blocked Serum Albumin, bovine	0.2 µm filtered

cell growth media | culture media

Customized Cell Culture Media

TRINA BIOREACTIVES specializes in the production of special formulation media and solutions exactly suitable to the customer's specifications. The products are produced, sterile filtered and aseptically filled in dedicated clean rooms.

Serum Media

Code	Name	Specificity
MC0400	CellPro Albumin Solution	10% solution Albumin solution
MC1200	Serum Free Culture Medium	Free of animal or human serum
MC2000	LipoCell Concentrate	Cholesterol, phospholipids and fatty acids
MC3000	BSA Lipid enriched Matrix	BSA enriched with BCC
MC4050	Transferrin Matrix	Transferrin based Cell Growth Medium
MC1500	Human Platelet Matrix	Animal free FBS replacement Media
SN0500	AB human Serum	Pure human AB Serum for culture Media
TP3310	FBS Serum	High quality FBS
TP3300	Donor Calf Serum	Collected from USDA licensed premises
TP0300	Donor Bovine Serum	Collected from USDA licensed premises
TP0715	Porcine Serum	Collected from USDA licensed premises

Materials can be charcoal stripped, heat inactivated, delipidized or processed in any possible way.

- High quality raw materials, sterile filtration
- Short production times; normally within 2 – 4 weeks
- Flexible packaging and
- 20 years of experience in matrix production





DISEASE
STATE
PLASMA



2 DISEASE STATE PLASMA | GENERAL & INFECTIOUS

positive plasma | control serum

Worldwide collection network

- Infectious & General
- TORCH
- Hepatitis
- Autoimmune & Allergy
- IgM / IgA / IgG
- Viral load / Genotyped
- Characterized / Subtyped
- Donor consent / IRB cleared

Bulk Serum Processing

Matrix

- | | |
|-----------------|------------------------------|
| • Screening | • Raw Material Qualification |
| • Analyte Titer | • Matrix Selection |

Process

- | | |
|------------------------------|---------------------|
| • Filter Method | • Processing Method |
| • Buffer | • Defibrination |
| • Antimicrobial / Antifungal | • Delipidation |
| • Proprietary Stabilization | • Dialyse |
| • Heat treatments | • Level adjustment |

Custom

- | | | |
|---------------------------------|----------------------------|---|
| • Natural Enzyme immobilization | • Stability Data | • Additives for Lyophilization / Liquid Stability |
| | • Vial Selection | |
| • Protease Inhibitors | • Additives / Antioxidants | • Cryoprotectants |

Application

Research	IVD Manufacturing	Clinical Labs
500 Donor Panels Aliquot Volumes	10L – 1000L Batches Supply Chain Setup Bulk Packaging & Storage	Customized Controls 0.5 – 50 ml Aliquotes

2 DISEASE STATE PLASMA | GENERAL & INFECTIOUS

positive plasma | control serum

Raw plasma, serum off the clot or defibrinated plasma for manufacturing of R&D and IVD components. Please ask our TRINA-Team for specific samples. All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive, unless otherwise specified.

	Code	Specificity	Form
A	DM1003	Adenovirus IgA	frozen
	DM1004	Adenovirus IgM	frozen
	DM1011	Adenovirus IgG	frozen
	DM1013	Alkaline Phosphatase positive Serum	frozen
	DM1012	Amoebe	frozen
	DM1010	anti-Streptolysin O antibody (ASO)	frozen
	DM1009	ASO negative	frozen
B	DM1022	Barmah forest IgM	frozen
	DM1023	Barmah forest IgG	frozen
	DM1015	Bordetella pertussis IgA positive Plasma	frozen
	DM1017	Bordetella pertussis IgG positive Plasma	frozen
	DM1016	Bordetella pertussis IgM positive Plasma	frozen
	DM1014	Bordetella pertussis negative	frozen
	DM1024	Brucella IgA positive	frozen
	DM1018	Brucella IgG positive	frozen
	DM1019	Brucella IgM positive	frozen
C	DM1029	Campylobacter	frozen
	DP1000	Cancer specified Patient Plasma	frozen
	DM1020	Candida IgA positive	frozen
	DM1021	Candida IgM positive	frozen
	DM1028	Chagas negative	frozen
	DM1030	Chagas antibody	frozen
	DM1031	Chlamydia IgG	frozen
	DM1038	Chlamydia IgA	frozen
	DM1034	CIC (Circulating immune complex)	frozen
	DM1032	C-Reactive protein (CRP)	frozen
	DM1036	Chikungunya	frozen
	DM1035	Coxiella positive	frozen



Code	Specificity	Form
DM1033	Cryptococcus neoformans	frozen
DV1029	Cytomegalovirus IgA (anti-CMV IgA)	frozen
DV1030	Cytomegalovirus IgG (anti-CMV IgG)	frozen
DV1031	Cytomegalovirus IgM (anti-CMV IgM)	frozen
DV1032	Cytomegalovirus negative	frozen
DV1033	Cytomegalovirus DNA positive	frozen

DM1040	D-Dimer-Positive	frozen
DM1052	Dengue IgA	frozen
DM1051	Dengue IgG	frozen
DM1050	Dengue IgM	frozen
DM1053	Dengue NS1	frozen
DM1054	Dengue RNA	frozen
DM1063	Deamidated gliadin IgA	frozen
DM1064	Deamidated gliadin IgG	frozen

D

DM2103	E2 elevated	frozen
DV1058	EBNA IgA (Nuclear Antigen)	frozen
DV1056	EBNA IgG (Nuclear Antigen)	frozen
DV1057	EBNA IgM (Nuclear Antigen)	frozen
DV1050	EBV IgG positive Plasma	frozen
DV1059	EBV EA negative	frozen
DV1053	EBV Viral Capsid Antigen (EBV VCA)	frozen
DV1055	EBV Viral Capsid Antigen negative	frozen
DM1067	E-Coli	frozen
DM1070	Endometriosis (dormant)	frozen
DM1065	Enterovirus positive	frozen
DV1052	Epstein Barr Virus Early Antigen (EBV EA)	frozen
DV1051	Epstein Barr Virus IgM (EBV IgM)	frozen
DV1054	Epstein Barr Virus negative	frozen

E

DM1078	FSME	frozen
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F

DM1060	Gammaglobulin elevated	frozen
DM1066	Gonococcus	frozen
DM1069	Gastro Intestinal CA19-9	frozen

G

2 DISEASE STATE PLASMA | GENERAL & INFECTIOUS

positive plasma | control serum

	Code	Specificity	Form
H	DM1081	Helicobacter pylori	frozen
	DM1083	Helicobacter pylori negative	frozen
	DM1082	Hemolyzed specimens	frozen
	DV1085	Herpes Simplex Virus I+II IgG	frozen
	DV1087	Herpes Simplex Virus I+II IgM	frozen
	DV1086	Herpes Simplex Virus I+II negative	frozen
	DV1081	Herpes Simplex Virus Type I IgG	frozen
	DV1082	Herpes Simplex Virus Type I IgM	frozen
	DV1083	Herpes Simplex Virus Type II IgG	frozen
	DV1084	Herpes Simplex Virus Type II IgM	frozen
	DV1080	Heterophile Antibody	frozen
	DM1080	Human anti Mouse antibodies (HAMA)	frozen
	DM1085	Hanta Virus	frozen
	DM1089	Hyper Gammaglobulin	frozen
I	DM1097	Icteric	frozen
	DM1090	Immunoglobulin E antibody	frozen
	DM1092	Infectious Mono (EBV)	frozen
	DM1094	Influenza A	frozen
	DM1095	Influenza B	frozen
	DM1093	Interleukin 6 (IL-6)	frozen
	DM1091	IV drug abusers	frozen
	DM1096	Japanese Encephalitis	frozen
L	DM1100	Legionella antibody	frozen
	DM1099	Leishmania	frozen
	DM1098	Leptospira IgM	frozen
	DM1113	Lipoprotein high	frozen
	DM1101	Lyme disease IgG	frozen
	DM1102	Lyme disease IgM	frozen
	DM1103	Lyme negative	frozen
	DM1120	Liver Cytosol Antibody Type1 (LC1)	frozen
M	DM1210	Malaria	frozen
	DM1200	Measles IgG	frozen
	DM1201	Measles IgM	frozen



Code	Specificity	Form
DM1203	Measles negative	frozen
DM0010	Multiple PCR NEG	frozen
DM1204	Mumps IgG	frozen
DM1205	Mumps IgM	frozen
DM1206	Mumps negative	frozen
DM1209	Myasthenia gravis	frozen
DM1207	Mycoplasma pneumonia / Trachomatis	frozen
DM1208	Myeloma antibody	frozen

DM1301	Neisseria Gonorrhoeae	frozen	N
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DM1505	Parainfluenza negative	frozen	P
DM1504	Parainfluenza positive	frozen	
DM1500	Parvovirus IgM	frozen	
DM1501	Parvovirus IgG	frozen	
DM1503	Parvovirus negative	frozen	
DM2105	Progesterone elevated	frozen	
DM1517	Prostate Specific Antigen (PSA)	frozen	
DM1518	Prostate Specific Antigen, negative	frozen	

DM1601	Q-Fever IgM	frozen	Q
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DM1680	Ross-River IgM	frozen	R
DM1681	Ross-River IgG	frozen	
DM1720	RSV	frozen	
DM1702	Rubella IgG	frozen	
DM1703	Rubella IgM	frozen	
DM1704	Rubella negative	frozen	
DM1700	Rubella Screening off clot	frozen	

DM1804	Serum Amyloid A	frozen	S
DM1801	Shigella antibody	frozen	
DM1802	Syphilis antibody	frozen	

DM1805	TBE (Tick-Borne Encephalitis) IgM pos.	frozen	T
DM1905	TORCH negative	frozen	

2 DISEASE STATE PLASMA | GENERAL & INFECTIOUS

positive plasma | control serum

Code	Specificity	Form
DM1904	TORCH positive	frozen
DM1907	Toxocara canis	frozen
DM1901	Toxoplasma IgG	frozen
DM1902	Toxoplasma IgM	frozen
DM1903	Toxoplasma negative	frozen
DM1803	Treponema negative	frozen
DM1810	Treponema Pallidum IgG	frozen
DM1812	Treponema Pallidum IgM	frozen
DM1833	Trichomonas Vaginalis	frozen
DM1910	Tuberculosis	frozen
DM1921	Typhoid Fever IgG	frozen
DM1922	Typhoid Fever IgM	frozen

U	DM2001	Urea plasma	frozen
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V	DV1212	Varicella Zoster Virus (VZV) negative	frozen
	DV1209	Varicella Zoster Virus IgA	frozen
	DV1210	Varicella Zoster Virus IgG	frozen
	DV1211	Varicella Zoster Virus IgM	frozen
	DM2101	Vimentin	frozen

W	DM2120	WNV positive	frozen
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Y	DM2200	Yersinia	frozen
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Z	DV1213	Zika IgM	frozen
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Retro viruses

Code	Specificity	Form
DR1009	HIV-I/II negative plasma	frozen
DR1091	anti-HIV-I Virus Type 1	frozen
DR1092	anti-HIV-II Virus Type 2	frozen
DR1093	HIV Type 1+2	frozen
DR1094	anti-HIV-I Virus Type 0	frozen
DR1095	HIV-I Antigen	frozen
DR1096	HIV-II-Antigen	frozen
DR1097	HIV Seroconversion panel	frozen
DR1109	HTLV-I/II negative plasma	frozen
DR1190	Human T-cell Lymphotropic Virus Type 1 by PCR	frozen
DR1193	anti-HTLV I/II positive plasma	frozen
DR1194	anti-HTLV I	frozen
DR1195	anti-HTLV II	frozen
DL4301	HTLV I Lysate, Cell culture	semi-pure

2 DISEASE STATE PLASMA | HEPATITIS

positive plasma | control serum

Hepatitis

Code	Specificity	Form
DH1101	anti-HAV IgG positive	frozen
DH1102	anti-HAV IgM positive	frozen
DH1103	Hepatitis A Virus negative	frozen
DH1151	anti-HAV IgG negative	frozen
DH1152	anti-HAV IgM negative	frozen
DH1200	HBsAg positive	frozen
DH1201	HBV mutation	frozen
DH1203	HBsAg subtype AD	frozen
DH1204	HBsAg subtype AY	frozen
DH1205	anti-HBs positive (total)	frozen
DH1206	anti-HBc positive (total)	frozen
DH1206-S	anti-HBc positive serum	frozen
DH1207	anti-HBc IgM positive	frozen
DH1208	HBeAg positive	frozen
DH1209	anti-HBe positive	frozen
DH1210	anti-HBe negative	frozen
DH1211	anti-HBs/anti-HBc positive	frozen
DH1220	HBV DNA positive	frozen
DH1256	anti-HBc IgG negative	frozen
DH1257	anti-HBc IgM negative	frozen
DH1258	anti-HBc total negative	frozen
DH1301	anti-HCV positive	frozen
DH1302	HCV (virus only)	frozen
DH1303	HCV seroconversion	frozen
DH1401	HDV positive	frozen
DH1403	HEV IgG positive	frozen
DH1414	HEV PCR positive	frozen



2 DISEASE STATE PLASMA | AUTOIMMUNE & ALLERGY

positive plasma | control serum

Raw plasma, serum off the clot or defibrinated plasma for manufacturing of positive controls. Please ask our TRINA-Team for specific samples.
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Autoimmune Diseases

TRINA BIOREACTIVES has a full range of Human Plasma specific for Autoimmune Diseases to serve the manufacturers of such kits all over the world.

	Code	Specificity	Form
A	DA1020	ACA anti centromere antibody	frozen
	DA1021	Acetylcholine receptor	frozen
	DA1010	AKA anti-Keratin	frozen
	DA1003	ANA Centromere pattern	frozen
	DA1008	ANA Homogeneous pattern	frozen
	DA1009	ANA Ki	frozen
	DA1002	ANA negative	frozen
	DA1013	ANA Nucleolar pattern	frozen
	DA1015	ANA Peripheral pattern	frozen
	DA1018	ANA Speckled pattern	frozen
	DA1000	anti-Adrenal cortex antibodies	frozen
	DA1001	Antinuclear Antibodies (ANA)	frozen
B	DA0201	Basement Membrane antibody	frozen
C	DA1520	c-ANCA	frozen
	DA0301	Cardiolipin antibody	frozen
	DA0321	CCP positive	frozen
	DA0303	Celiac	frozen
	DA0305	Centromere antibody	frozen
	DA0311	Complement C1Q	frozen
	DA0317	C-Reactive Protein (CRP)	frozen
	DA0320	Crohn disease	frozen



DA0410	Diabetic Type I, K3 EDTA	frozen	D
DA0420	Diabetic Type II, K3 EDTA	frozen	
DA0401	DNA antibody (n-DNA)	frozen	
DA0402	ds-DNA	frozen	
DA0403	ds-DNA negative	frozen	
DA0421	DSG antibody	frozen	
DA0404	ss-DNA	frozen	
DA0501	anti-Fibrillarin	frozen	F
DA0701	Gastric Parietal Cell antibody	frozen	G
DA0702	beta-2-Glycoprotein antibody	frozen	
DA0720	beta-2-Glycoprotein IgA antibody	frozen	
DA0708	beta-2-Glycoprotein negative	frozen	
DA0712	Guillain Barre Syndrom (GBS)	frozen	
DA0706	Gliadin	frozen	
DA0710	Glomerular Basement Membrane (GBM)	frozen	
DA0805	Hashimoto / Graves Disease antibody	frozen	H
DA0809	Histone antibody	frozen	
DA0910	Intrinsic Factor	frozen	I
DA0911	Insulin Serum	frozen	
DA0918	Islet Cell antibody	frozen	
DA1514	Jo-1 antibody	frozen	J
DA1130	KU antibody positive	frozen	K
DA1110	Liver Kidney Microsomal antibody	frozen	L
DA1120	Lupus anticoagulant antibody	frozen	
DA1209	Microsomal antibody	frozen	M
DA1210	Mitochondrial antibody	frozen	
DA1211	Mixed connective tissue, anti-Sm / RNP	frozen	
DA1224	MPO (p-ANCA)	frozen	
DA1935	Multiple autoimmune positive	frozen	

2 DISEASE STATE PLASMA | AUTOIMMUNE & ALLERGY

positive plasma | control serum

	Code	Specificity	Form
O	DA1405	Osteocalcin	frozen
P	DA1224	pANCA (Myeloperoxidase)	frozen
	DA1501	Parietal Cell (APCA) antibody	frozen
	DA1504	PBC positive	frozen
	DA1521	PCNA proliferating cell nuclear antigens	frozen
	DA1503	Pemphigus antibody	frozen
	DA1226	anti-Phospholipid syndrome	frozen
	DA1522	PM-Scl polymyositis / scleroderm overlap antigen	frozen
	DA1520	Proteinase 3 (cANCA)	frozen
	DA1530	Psoriasis positive	frozen
	DA1929	PTH	frozen
R	DA1706	Rheumatoid Arthritis positive (RA)	frozen
	DA1708	Rheumatoid Factor (RF)	frozen
	DA1707	Rheumatoid Factor negative	frozen
	DA1709	Ribonucleoprotein antibody (RNP)	frozen
	DA1710	Ribosomal positive	frozen
	DA1719	RNA Polymerase	frozen
	DA1718	RNP negative	frozen
	DA1717	RNP positive	frozen
S	DA1802	anti-Saccharomyces cerevisiae (ASCA)	frozen
	DA1803	Scl-70 positive plasma	frozen
	DA1819	Sjogren's syndrome	frozen
	DA1805	SLE	frozen
	DA1816	Sm negative	frozen
	DA1812	Smith positive plasma SM	frozen
	DA1812-S	Smith positive serum SM	frozen
	DA1813	Smooth Muscle antibody (ASMA)	frozen
	DA1815	Sperm antibody	frozen
	DA1930	SS-A (monospecific)	frozen
	DA1811	SS-A positive plasma	frozen
	DA1810	SS-B positive Plasma	frozen
	DA1818	Striated Muscle	frozen



DA1927	Thrombocytopenic purpura	frozen
DA1923	Thyroglobulin antibody	frozen
DA1921	Thyroglobulin negative	frozen
DA1924	Thyroid antibodies (anti-microsomal and anti-thyro)	frozen
DA1926	Tissue Transglutaminase (tTG)	frozen
DA1925	TPO antibodies	frozen
DA1925-D	TPO pos plasma (defibrinated)	frozen
DA1923	TPO / TG pos plasma	frozen
DA1928	TSH	frozen
DA1931	TSH Receptor Ab negative	frozen
DA1933	TSH Receptor Ab positive	frozen

T

2 DISEASE STATE PLASMA | AUTOIMMUNE & ALLERGY

IgE | allergy plasma | elevated IgE

Allergy

Various monospecific allergy serum & plasma, characterized, single or pooled and defibrinated upon specification (100 – 800 ml)

Available Allergy classes

Dust Mites	Epidermals	Food
Grass Pollen	General Allergy	Moulds and Yeast
Tree Pollen	Venoms	Weed Pollen

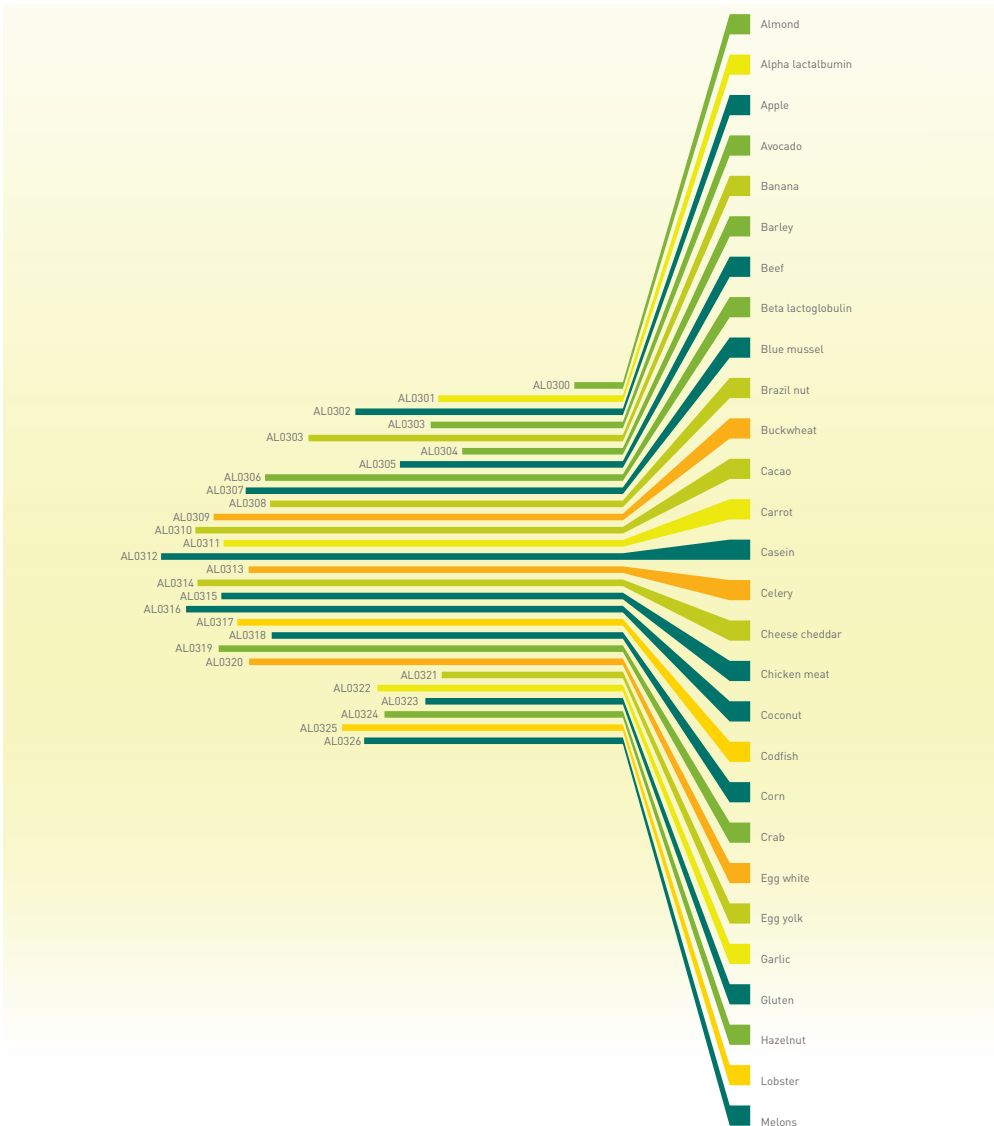
(negative zero matrix available)

Dust Mites

Code	Specificity	Code	Specificity
AL0101	Dermatophagoides pteronyssinus	AL0104	Lepidoglyphus destructor
AL0102	Acarus siro	AL0105	Dermatophagoides microceras
AL0103	Dermatophagoides farinae	AL0106	Tyrophagus putrescentiae

Epidermals

Code	Specificity	Code	Specificity
AL0200	Cat epithelium	AL0210	Hamster epithelium
AL0201	Cat dander	AL0211	Horse dander
AL0202	Chicken feathers	AL0212	Pigeon droppings
AL0203	Cow dander	AL0213	Rabbit epithelium
AL0204	Dog dander	AL0214	Sheep epithelium
AL0205	Dog epithelium	AL0215	Swine epithelium
AL0206	Duck feathers	AL0216	Budgerigar feather
AL0207	Goat epithelium	AL0208	Goose feathers
AL0208	Goose feathers	AL0209	Guinea pig epithelium
AL0209	Guinea pig epithelium		



Raw plasma, serum off the clot or defibrinated plasma for manufacturing of positive controls. Please ask our TRINA-Team for specific samples.
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The full list of products is available at www.trinabio.com

2 DISEASE STATE PLASMA | AUTOIMMUNE & ALLERGY

IgE | allergy plasma | elevated IgE

Food

Code	Specificity	Code	Specificity
AL0301	Almond	AL0329	Milk
AL0302	Alpha lactalbumin	AL0330	Mushroom
AL0303	Apple	AL0331	Mutton
AL0304	Avocado	AL0332	Oat
AL0305	Banana	AL0333	Onion
AL0306	Barley	AL0334	Orange
AL0307	Beef	AL0335	Pea
AL0308	Beta lactoglobulin	AL0336	Peach
AL0309	Blue mussel	AL0337	Peanut
AL0310	Brazil nut	AL0338	Pear
AL0311	Buckwheat	AL0339	Pork
AL0312	Cacao	AL0340	Potato
AL0313	Carrot	AL0341	Rice
AL0314	Casein	AL0342	Rye
AL0315	Celery	AL0343	Salmon
AL0316	Cheese cheddar	AL0344	Sesame
AL0317	Chicken meat	AL0345	Shrimp
AL0318	Coconut	AL0346	Soybean
AL0319	Codfish	AL0347	Strawberry
AL0320	Corn	AL0348	Tomato
AL0321	Crab	AL0349	Tuna
AL0322	Egg white	AL0350	Wheat
AL0323	Egg yolk	AL0351	White bean
AL0324	Garlic	AL0352	Yeast
AL0325	Gluten	AL0356	Gelatin
AL0326	Hazelnut	AL0357	Cherry
AL0327	Lobster	AL0358	Fish
AL0328	Melons	AL0359	Lamb



Grass Pollen

Code	Specificity	Code	Specificity
AL0400	Bahia grass	AL0411	Meadow fescue
AL0402	Bermuda grass	AL0412	Meadow foxtail
AL0403	Brome grass	AL0413	Redtop grass
AL0404	Canary grass	AL0414	Rye grass
AL0405	Cocksfoot, Orchard grass	AL0415	Sweet vernal grass
AL0406	Common reed	AL0416	Timothy
AL0407	Cultivated rye	AL0417	Velvet grass
AL0408	Cultivated wheat	AL0418	Wild rye grass
AL0409	Johnson grass	AL0419	Maple leaf sycamore
AL0410	June, Kentucky blue	AL0499	Grass pollen

General Allergy

Code	Specificity	Code	Specificity
AL0500	Multiple allergy	AL0505	Latex
AL0501	Butterfly	AL0506	Low Total IgE
AL0502	Cockroach	AL0507	Allergen Specific IgG
AL0503	House dust	AL0508	Fire ant
AL0504	Elevated Total IgE		

2 DISEASE STATE PLASMA | AUTOIMMUNE & ALLERGY

IgE | allergy plasma | elevated IgE

Moulds and Yeast

Code	Specificity	Code	Specificity
AL0601	Alternaria alternata	AL0610	Helminthosporium halodes
AL0602	Aspergillus fumigatus	AL0611	Hormodendrum hordei
AL0603	Aureobasidium pullulans	AL0612	Mucor racemosus
AL0604	Botrytis cinerea	AL0613	Penicillium notatum
AL0605	Candida albicans	AL0614	Phoma betae
AL0606	Cladosporium herbarum	AL0615	Rhizopus nigricans
AL0607	Curvularia lunata	AL0616	Stemphylium botryosum
AL0608	Epicoccum purpurascens	AL0617	Stemphylium solani
AL0609	Fusarium moniliforme	AL0618	Trichoderma

Tree Pollen

Code	Specificity	Code	Specificity
AL0701	Acacia	AL0716	Mulberry
AL0702	Alder	AL0717	Oak
AL0703	Australian pine	AL0718	Olive
AL0704	Beech	AL0719	Pecan
AL0705	Birch	AL0720	Privet
AL0706	Cottonwood	AL0721	Queen palm
AL0707	Elm	AL0722	Red maple
AL0708	Eucalyptus	AL0723	Sycamore
AL0709	Hazelnut	AL0724	Walnut
AL0710	Italian cypress	AL0725	White ash
AL0711	Japanese cedar	AL0726	White pine
AL0712	Maple, box elder	AL0727	Willow
AL0713	Melaleuca	AL0728	White oak
AL0714	Mesquite	AL0729	Japanese cypress
AL0715	Mountain cedar	AL0730	Japanese hop



Venoms

Code	Specificity
AL0801	Honeybee
AL0802	Paper wasp
AL0803	Yellow jacket

Code	Specificity
AL0804	White-faced hornet
AL0805	Yellow hornet

Weed Pollen

Code	Specificity
AL0901	Cocklebur
AL0902	Common pigweed
AL0903	Dandelion
AL0904	Nettle
AL0905	Ox-eye daisy
AL0906	Plantain, English
AL0907	Rough pigweed

Code	Specificity
AL0908	Russian thistle
AL0909	Mugwort
AL0910	Common ragweed
AL0911	Parietaria officinalis
AL0912	Golden rod
AL0913	Giant ragweed
AL0354	Turkey

2 DISEASE STATE PLASMA | COAGULATION DEFICIENT

positive plasma | control serum

Human plasma for manufacturing of positive controls. Please ask our TRINA-Team for specific samples.

All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive, unless otherwise specified.

Coagulation Speciality Plasma

Code	Specificity	Form
K0300	Coagulation specimen	frozen
K0311	Coumadin	frozen
K0605	Factor V Deficient	frozen
K0607	Factor VII Deficient	frozen
K0608	Factor VIII Deficient	frozen
K0608-1	Factor VIII with Inhibitor	frozen
K0609	Factor IX Deficient	frozen
K0610	Factor X Deficient	frozen
K0611	Factor XI Deficient	frozen
K0612	Factor XII Deficient	frozen
K0627	Factor VII Congenital Deficient	frozen
K0630	Factor X Congenital Deficient	frozen
K0631	Factor XI Congenital Deficient	frozen
K0632	Factor XII Congenital Deficient	frozen
K0635	Factor V Immune Depleted	frozen
K0638	Factor VIII Immune Depleted	frozen
K0639	Factor IX Immune Depleted	frozen
K0640	Factor X Immune Depleted	frozen
K0641	Factor XI Immune Depleted	frozen
K0642	Factor XII Immune Depleted	frozen
K0660	Factor VIII Artificially Depleted	frozen
K0651	Protein "S" Congenital Deficient	frozen
K0650	Protein "S" Immune Depleted	frozen
K0652	Protein "S" Deficient	frozen
K0680	Fletcher Factor Deficient	frozen



Code	Specificity	Form
K0810	Heparin plasma	frozen
K0901	Plasminog. Activator Inhibitor	frozen
K1110	Lipaemic plasma	frozen
K1150	Lupus anticoagulant	frozen
K1151	Lupus IgG	frozen
K2110	Von Willebrand Factor	frozen

All materials are single donation tested at the blood bank according to FDA regulations and / or methods cleared in compliance with the European Directive, unless otherwise specified.

Causes of an elevated PT with a normal APTT

- Coumarin effect
- Liver disease
- Vitamin K deficiency
- Disseminated intravascular coagulation
- Inherited Factor VII deficiency
- Factor VII inhibitor
- Lupus anticoagulant



CLINICAL
SPECIMEN



3 CLINICAL SPECIMEN | PATIENT SAMPLES

pre-clinical specimen | patient samples

TRINA BIOREACTIVES provides biological material for research in diagnostic and pharmaceutical industries. Collected specimen are fully compliant with actual ethical and regulatory criteria (IRB approval / ICF documentation).

Worldwide collection centers

- Infectious Disease
- Oncology
- Cardiac Disease
- Autoimmune
- Normal / Healthy Donors
- Endocrinology
- Diabetes
- Genetic Disorders
- Whole Blood
- Serum / Plasma
- Tissue (FFPE, Fresh Frozen)
- CSF
- Urine, Saliva
- Swab
- Matched Patient Sets
- Longitudinal Patient Sets

Diagnostic / Therapeutic Markers

- Quality Control
- Kit Development
- Assay Validation
- Instrumental Performance Validation

Custom Anticoagulants / Matched Pairs

Code	Specificity	Form
NP0100	Plasma, CPD-A	single / pooled
NP0110	ACDA Plasma	single / pooled
NP0200	Human Plasma, Citrate	single / pooled
NP0300	Normal Plasma CPD	single / pooled
NP0990	Normal Plasma, Lithium Heparin	single / pooled
NP0992	Normal Plasma, K3 EDTA	single / pooled
NP0993	Normal Plasma, Na2 EDTA	single / pooled
NP0995	Normal Plasma, Sodium Heparin	single / pooled

Any anticoagulant can be paired and matched up.

3 CLINICAL SPECIMEN | PATIENT SAMPLES

clinical samples | R&D

Patient Samples

Material Characterisation

- Different Matrixes (Serum, EDTA, LiHep, etc.)
- Multiple bleeds (same donor in different Matrixes)

Clinical Set-up

- Customized Protocols
- Multiple Biosamples

Clinical Data

- Patient Data (Age / Gender / GT)
- Detailed Anamnesis (prospective)

Biobanking

- Customized aliquoting
- On-demand storage
- Customized labelling / bar coding
- Storage reports

0.5 – 2 ml
Retrospective



2 – 20 ml
Prospective



20 – 800 ml
Bulk



Over **50'000 donors** for biospecimen from globally different diagnostic and demographic individuals. (Europe, Asia, Americas, Africa)

Different Matrixes (Serum, EDTA, LiHep, etc.) & **Multiple bleeds 1 - 800 ml** per Donor.

Clinical Data: **Patient Data** (Age / Gender / GT) Detailed Anamnesis (prospective)

Code	Specificity	Form
PS1000-BC	Breast Cancer Specimen	frozen
PS1000-CRP	CRP positive Specimen	frozen
DP0102	HBsAg, Genotyped	frozen
PS1000-TUT	Troponin I positive Specimen	frozen
PS9010	Urine Specimen	frozen



pre-clinical specimen | patient samples

Infectious Disease

0.5 – 200 ml, serum & plasma

CMV IgG / IgM negative	HIV – 1	IgG
HCV IgG	HIV – 2	Parvovirus B19
HBsAg	HIV – 0	Rubella IgM / IgG / neg. / Sepsis
HBc IgM / Total Ab	HTLV-1	Syphilis IgG / IgM
HBeAg / HBeAb	HTLV-2	Toxoplasma IgG / IgM / neg.
HEV	Malaria	Measles

Pregnancy

0.5 – 200 ml, serum & plasma

hCG	Pre-eclampsia	Pregnancy serum (1–3 trimesters)
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Biochemistry

0.5 – 200 ml, serum & plasma

Vitamin D	Bilirubin (Total)
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Autoimmune

0.5 – 200 ml, serum & plasma

Anti-CCP	ANCA (Anti-MPO / Anti-PR3)	Rheumatoid Factor
Anti-GBM	Celiac Disease	SLE
EBNA	Crohn's Disease	Tissue Transglutaminase Abs
Tg	Gliadin Antibodies IgA IgG	
Anti-TPO	HAMA	

Oncology

0.5 – 200 ml, serum & plasma

Cancer diagnosis specimen		
AFP	CA 15-3	CEA
CA 125	CA 19-9	PSA

All materials are in serum, plasma or matched sets, 0.5 – 200 ml per donor.

3 CLINICAL SPECIMEN | PATIENT SAMPLES

pre-clinical specimen | patient samples

Thyroid

0.5 – 200 ml, serum & plasma

Free T3 (Triiodothyronine)	Parathyroid Hormone (PTH)	TSH
Free T4 (Thyroxine)		

Cardiac / Lipids

0.5 – 200 ml, serum & plasma

Cholesterol	Hypertension	Triglyceride
CK-MB	LDL	Troponin I
D-Dimer	Myoglobin	
HDL	NT proBNP	

Diabetes

0.5 – 200 ml, serum & plasma

HbA1c	Diabetes (Type I / II)	Glucose
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Organ Failure / Impairment

0.5 – 200 ml, serum & plasma

Renal Failure	Hepatic Impairment	Liver Kidney
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Endocrine

0.5 – 200 ml, serum & plasma

Cortisol	Oestradiol	SHBG
FSH	Progesterone	Testosterone
LH	Prolactin	

Neurology

0.5 – 200 ml, serum, plasma & CSF

Alzheimer	Dementia	Traumata
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The full list of products is available at www.trinabio.com



seroconversion panel | performance panels

Infectious Panels

Seroconversion, performance and assay validation panels

Code	Specificity	Form
DP0135	HBsAg mixed Titer Panel (HBsAg)	frozen / lyophil.
DP0102	HBc / HBs mixed Titer Panel	frozen / lyophil.
DP0160	Hepatitis A Virus (HAV) mixed Titer Panel	frozen / lyophil.
DP0240	Dengue mixed Titer Panel	frozen / lyophil.
DP0310	Chagas Panel	frozen / lyophil.
DR0280	HIV Panel	frozen / lyophil.
DR1702	Rubella IgM	frozen / lyophil.

This is a small selection of available panels.

Validation Panels for QA and R&D

- Ethnicity
- Age / Gender
- Matrix
- Serology
- Region
- Diagnosis
- Volume / Aliquots
- Genotype

PS1000 – Performance Panels

Customize your own panel. Up to 5000 Donors in matched anticoagulants.

Matrix	Serology	No. donors	ml / donors
EDTA / Serum matched	FDA - standard negative	10 – 5000	20 (10 x 2.0 ml)
Fresh whole Blood [LiHep]	CE standard negative	10 – 5000	10 (10 x 0.5 ml)
K2EDTA	Dengue negative WNV negative	10 – 5000	10 (10 x 1.0 ml)
Plasma / Serum matched	CE / PEI standard	10 – 5000	50 (25 x 2.0 ml)

3 CLINICAL SPECIMEN | PANELS & INTERFERENCES

interference samples | performance panels

Natural Interferences

In EDTA plasma, serum or any other Matrix

Endogenous interference	Optimal interfering concentration
Albumin	60 g/L
Bilirubin (unconjugated)	350 µmol/L
Bilirubin (conjugated)	350 µmol/L
Hemoglobin	2 g/L
Human DNA	0.4 mg/dl
Triglycerides	3000 mg/dl

Other Interferences: Systemic Lupus Erythematos (SLE), Rheumatoid Factor (RF) / CCP, Antinuclear Antibody (ANA), HAMA, Rubella, Medications.

Manufactured QC Panels (examples)

Code	Specificity		Form
DM1102-P	Borrelia IgM	5 levels	lyophil. / liquid
DV1031-P	CMV IgM	5 levels	lyophil. / liquid
DV1053-P	EBNA-G	4 levels	lyophil. / liquid
DH1102-P	HAV IgM	4 levels	lyophil. / liquid
DH1257-P	HBc IgM	5 levels	lyophil. / liquid
DH1200-P	HBsAg	5 levels	lyophil. / liquid
DV1082-P	HSV 1/2 IgM	5 levels	lyophil. / liquid
DM1902-P	TOXO IgM	5 levels	lyophil. / liquid
DM1802-P	Treponema	5 levels	lyophil. / liquid
DV1211-P	VZV IgM	5 levels	lyophil. / liquid
DA1708-P	RF/CCP	5 levels	lyophil. / liquid
DA1645-P	Toxo IgG	5 levels	lyophil. / liquid
DV1215-P	Rubella IgM	5 levels	lyophil. / liquid

- single / multi analyte formulated for manual & automated platforms
- Liquid, ready to use or lyophilized for long term storage
- 0.2 ml - 10 ml vials, liquid, frozen or lyophilized, labeled

The full list of QC Panels is available at www.trinabio.com



serum | plasma

Negative Plasma & Serum

All materials are freshly drawn on customer request, and are produced at US FDA registered and approved blood banks and are fully virus tested according to the regulation with FDA approved test procedures or in accordance with European directives.

Human Plasma

Code	Specificity	Form
NP0130	anti-HBs neg. source	single
NP0210	anti-HBs neg. source, customized	single
NP0230	anti-HBs & anti-HBc neg source	single
NP1201	anti-HTLV I/II negative source	single
NP1230	anti-HBs & anti-HBc & anti-HTLV- I/II neg source	single

Custom Anticoagulants

Code	Specificity	Form
NP0110	ACDA Plasma	single / pooled
NP0200	Human Plasma, Citrate	single / pooled
NP0300	Normal Plasma CPD	single / pooled
NP0990	Normal Plasma, Lithium Heparin	single / pooled
NP0992	Normal Plasma, K3 EDTA	single / pooled
NP0993	Normal Plasma, Na2 EDTA	single / pooled
NP0995	Normal Plasma, Sodium Heparin	single / pooled

Human Whole Blood & Blood Components

Code	Specificity	Form
SN0001	Whole Blood	single
SN0010	Erythrocyte Concentrate	single / pooled
NP0020	Red Blood Cells (Na2 EDTA)	single / pooled
SN0050	Buffy Coats	single
SN0060	SAG-M red Cells Concentrate	liquid
SN0992	K3 EDTA Whole Blood	frozen

3 CLINICAL SPECIMEN | CUSTOMIZED COLLECTION

PCR | viral serum matrix

Viral positive Bulk

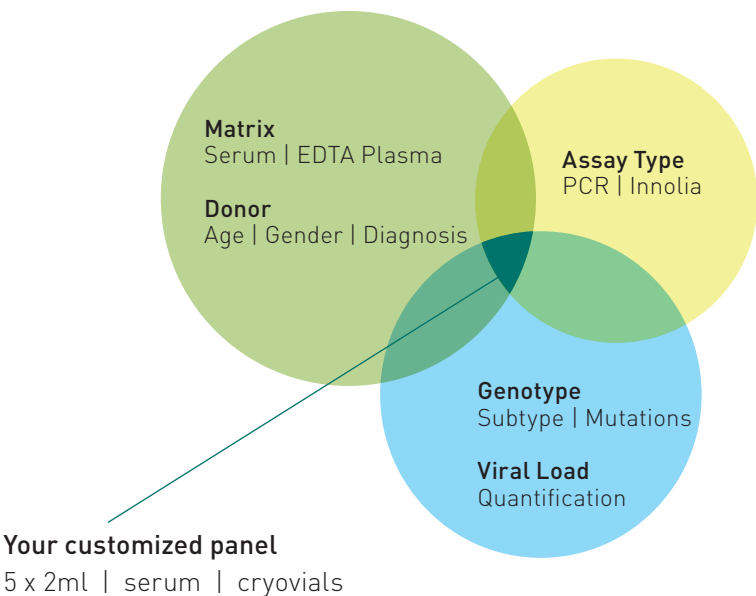
0.5 – 200 ml, serum and plasma fully tested and characterized

Marker	Viral load	Genotype	Serology	Sequence / Mutation
WNV	•		•	
HIV	•	•		
HCV	•	•	•	•
HBV	•	•	•	•
Parvo B19	•			
CMV	•	•	•	
HAV	•	•	•	

For each marker we also manufacture negative and control material.

Genotyped Plasma / Serum

R&D | validations & characterization



The full list of products is available at www.trinabio.com



R&D | assay validation

TRINA Clinical Services

Large variety of biological products and services, backed by expertise in virology, serology, immunology and molecular biology.

Laboratory testing services, including parallel testing

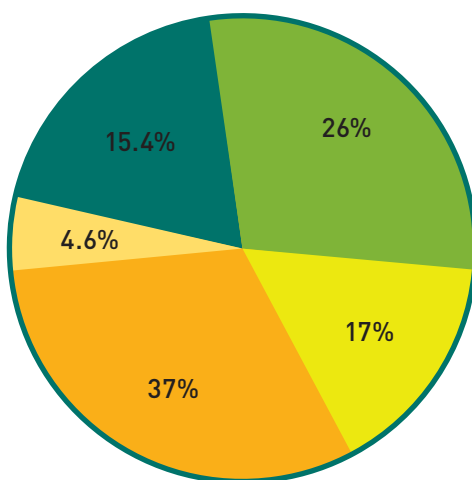
- Donor Identification / screenings for Markers / Conditions
- Management and analysis of collected data
- Sample management and logistical support

Clinical trial support

- Customized clinical data

Assay Validation

- Performance validation FDA / CE
- Screenings
- Quality monitoring materials



3 CLINICAL SPECIMEN | CUSTOMIZED COLLECTION

pre-clinical specimen | patient samples

TRINA BIOREACTIVES provides biological material for research in diagnostic and pharmaceutical industries. Collected specimen are fully compliant with actual ethical and regulatory criteria (IRB approval / ICF documentation).

Clinical Specimen



Over **50'000 donors** for biospecimen from globally different diagnostic and demographic individuals. (Europe, Asia, Americas, Africa)

Different Matrixes (Serum, EDTA, LiHep, etc.) &

Multiple bleeds 1 - 800 ml per Donor.

Clinical Data: **Patient Data** (Age / Gender / GT)

Detailed Anamnesis (prospective)

Isolated Cell Lines/ PBMC



Customized, cryopreserved, ready to use isolated cell lines from specific **selected donors**. (Donor characteristics such as: **Allergic / PMN enriched / vaccination boosted**). The isolation protocol is designed to meet your assay's specifications. www.trinacell.com

Assay Validation & Pre-clinical



Technical performance validation for **chemiluminescence, point of care and molecular based IVD applications**: A large donor base (> 5000 Donors in any serum / plasma matrix) for positive / negative / quantifications & validations.

The full list of products is available at www.trinabio.com



PBMCs | monocytes

Cell Line Isolation

Customized, cryopreserved ready to use isolated cell lines for immunology research. Derived from human whole blood or apheresis white blood cells. The isolation protocol is designed to meet your assay's specifications and can be adapted to your specification.

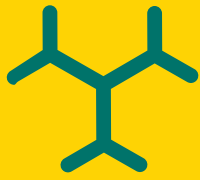
Code	Specificity	Form
IC1111	Customized cells	human plasma
IC1125	PB NK cells (CD56)	human plasma
IC1230	PB T cells (CD3)	human plasma
IC1280	PB B cells (CD19)	human plasma
IC1128	PB Monocytes (CD14)	human plasma
IC1235	PB TH cells (CD4)	human plasma
IC1138	PB Tc cells (CD8)	human plasma
IC1401	Human Peripheral Blood Leukopak	human plasma

- High quality isolated cell lines
- From clinically defined donors
- Allergy
- Cryopreserved and aliquot

Cell yield	Per donation
NK cells (CD56)	2-15 million (minimum)
T cells (CD3)	50 -500 million (minimum)
B cells (CD19)	2-15 million (minimum)
Monocytes (CD14)	60-300 million (minimum)
TH cells (CD4)	45-300 million (minimum)
Tc cells (CD8)	5-45 million (minimum)

More information unter: www.trinacell.com

The full list of products is available at www.trinabio.com



ANTIGENS AND ANTIBODIES



4 ANTIGENS & ANTIBODIES | ANTIGEN PRODUCTION

native | purified | cell cultured | recombinant

TRINA BIOREACTIVES is specialized in supplying high quality proteins and immuno-reagents for the diagnostic industry and research community. Our long experience, expertise and global network to produce the best product available, have led us to become a leading provider of proteins and immuno-reagents for the IVD industry.

Customized Production & Purification

- Research / development / production
- Standard calibrators in various assay formats
- Immunogens for raising antibodies

All products are delivered with testing for mandatory infectious markers as per FDA / CE.

Hepatitis

HBsAg Subtype AY / AD	HBeAg	HAV Antigen
HBsAg Subtype AD	HBcAg	HBsAg Subtype adw

Cancer Markers

CA 125	CA 19-9	CA 72-4
CA 15-3	C-Reactive Protein (CRP)	NSE
ALP	Cathepsin D	PSA & Complexes
NGAL	α -Fetoprotein (AFP)	PAP
CEA		

4 ANTIGENS & ANTIBODIES | ANTIGEN PRODUCTION

native | purified | cell cultured | recombinant

General

Transferrin Receptor	IL-18	PAPP-A
D-Dimer	hCG & beta hCG	Streptavidin
Ferritin	CRP	Transferrin

Autoimmune

SS-A / SS-B	Scl-70	RNP 70
Sm Antigen	Jo-1	SLO
RNP-Sm	pANCA / cANCA	MPO

Proteins

Immunoglobuline, Animal	SHBG	Antithrombin III
Immunoglobuline, Human	TBG	Alpha 1 Antitrypsin
Alpha 2 Macroglobulin (A2M)	Alpha 1 acid Glycoprotein	CRP
Beta 2 Microglobulin	Albumin Human	free Kappa light chain
RBP	ACT	free Lambda light chain

Tissue Proteins

Cathepsin D	Keratin	Trypsin
Ferritin	Thyroglobulin	

Cardiac Markers

Myoglobin	C-Reactive Protein (CRP)	Troponin I	Creatine Kinases
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Prostate Markers

PSA	PSA-ACT Complex
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Hormones

Chorionic Gonadotropin, Human (hCG)	FSH- α
Follicle Stimulating Hormone, Human (hFSH)	FSH- β
Growth Hormone, Human (hGH)	LH- α
Luteinizing Hormone, Human (hLH)	LH- β
Placental Lactogen, Human (hPL)	TSH- α
Thyroid Stimulant Hormone, Human (hTSH)	TSH- β

Renal Markers

A1M	B2M	CYS-C
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IVD antigens | ELISA

Bulk Antigens

Bacterial Antigens	Viral Antigens	Parasitic Antigens	Mycological Antigens	Recombinant
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TRINA BIOREACTIVES is the primary source for native human high quality antigens. All antigens are purified from human tissue and plasma collected in regulated and registered centers.

Chlamydia pneumoniae	Legionella Pneumophila
Chlamydia trachomatis	Leptospira Biflexa
Coxsackievirus	Measles Virus
Cytomegalovirus	Measles Virus (Premium)
Echinococcus granulosus	Mumps Virus
Echovirus	Mycoplasma Pneumoniae
EPSTEIN-BARR VIRUS	Parainfluenza Virus
Helicobacter pylori	Parainfluenza Virus
Hepatitis A	Parvovirus B19
Hepatitis B	Plasmodium Falciparui
Hepatitis C	Respiratory Syncytial Virus
Hepatitis D	Rotavirus
Hepatitis E	Rubella Virus
Herpes Simplex Virus 2	TBE Virus
Herpes Simplex Virus 1	Toxoplasma gondii
HIV	Treponema Pallidum
Human T-Lymphotropic	Varicella Zoster Virus
Influenza A Virus	VZV Glycoprotein
Influenza B Virus	Yersinia enterocolitica

The full list of products is available at www.trinabio.com

4 ANTIGENS & ANTIBODIES | ANTIGENS

antigens | controls | calibrators | panels

HBsAg Antigens

TRINA BIOREACTIVES data sheets for all codes are available at www.trinabio.com. All of our antigens are produced according to internal SOP or customer specified procedures.

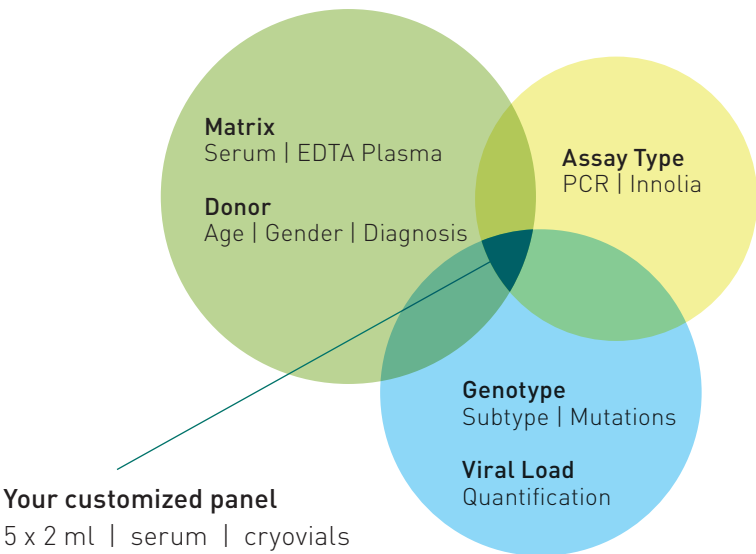
Code	Specificity	Form
A0820	HBsAg	recombinant
A0823	HBsAg, subtype AY	recombinant
A0824	HBsAg, subtype AD	recombinant
A0825	HBsAg	recombinant
A0830	HBsAg	human plasma
A0835	HBsAg, subtype AY	human plasma
A0840	HBsAg subtype AD	human plasma
A0841	HBsAg, subtype AD inactivated	human plasma

Hepatitis positive Contol Materials

Hepatitis positive | plasma | HBsAg | HAV

HBsAg subtype AD	anti-HBe positive	anti-HCV positive
HBsAg subtype AY	HBV DNA positive	HEV IgM / IgG
anti-HBc IgM	a-HBs high titre	HAV IgM / IgG

- 20 ml- 20 L batches, single units or 0.2 µm filtered and processed





Product application & modification stream

Crude Pure (spiking)

Immunoglobulin G	A0921	Serum fractionation
Bovine Serum Albumin	TP9102	Cohn fractionation
Human Alpha-1-Microglobulin	A0160	Aseptic filtration
Human Transferrin	A1950	Iron saturation
HDL / LDL Concentrate	CL1130	High performance control

Semi-Pure

Transferrin Receptor	A1953	HPLC Column
CRP Lyophilized	A0385	Lyophilization
PSA antigen	A1585	Buffer & preservative
Helicobacter pylori antigen	A0894	Washed, solubilized
Bence-Jones Kappa / Lambda	A0924	Custom selection of raw mat.
BCC	CT1120	For spiking

High-Pure

HBsAg Subtype Ay/Ad	A0840	Subtyping
HBsAg affinity pure	A0835	Ligand affinity-ion exchange
HBsAg inactivated	A0841	Buffer selection
TSH antigen high pure	A1932	E. Coli derived recombinant
Parvovirus B19	A1506	single band / SDS-PAGE
CRP high pure	A0385	Lysate
HAV antigen	A0815	0.2 µm filtration
AFP high pure	A0140	Control analyte

ISO 9001:2008 / ISO 13485:2003 certified

4 ANTIGENS & ANTIBODIES | ANTIGENS

IVD manufacturing | R&D

TRINA data sheets for all codes available at TRINA BIOREACTIVES.

All of our antigens are produced according to internal SOP or customer specified procedures. Starting materials of our antigens are tested for virus markers by FDA / CE tests. Virus positive antigens are inactivated.

In bulk for diagnostic manufacturing and research.

A	Code	Specificity	Source
	A0050	Adenovirus	human plasma
	A0140	AFP antigen	human serum
	A0101	Albumin	human path. urine
	A0102	Albumin	human plasma
	A0103	Albumin	human placenta
	A0104	Albumin recombinant	yeast
	A0175	ALP	human
	A0120-2	alpha-1-Acid glycoprotein	human serum
	A0120-1	alpha-1-Acid glycoprotein (AGP)	human serum
	A0121	alpha-1-Antichymotrypsin (ACT)	human serum
	A0122	alpha-1-Antitrypsin	human serum
	A0160	alpha-1-Microglobulin	human path. urine
	A0160-2	alpha-1-Microglobulin	human urine
	A0161	alpha-2-Macroglobulin	human serum
	A0162	alpha-1-Microglobulin	recombinant
	A0170	alpha-Amylase	human pancreas
	A0171	alpha-Amylase	human salivary
	A0140-1	alpha-Feto Protein (AFP)	human fluid
	A0140-2	alpha-Feto Protein (AFP)	human fluid
	A0140-3	alpha-Feto Protein (AFP)	cell culture
	A0181	Apolipoprotein	human plasma
	A0182	Allergen	wheat [7352]
B	A0326	β Human Chorionic Gonadotrophin (hCG)	human urine
	A0218-1	β-2-Glycoprotein 1	human plasma
	A0205-2	β-2-Microglobulin, part pure	human urine
	A0205-1	β-2-Microglobulin, high pure	human urine
	A0210	β-Glucuronidase / Arylsulfatase	helix pomatia
	A0327	beta hCG	recombinant



A0218-2	Breast tumor CA 15-3	human fluids
A0220-1	Breast tumor CA 15-3	human fluids
A0220-2	Breast tumor CA 15-3	cell culture

A0385-1	C Reactive Protein (CRP)	human serum
A0385-2	C Reactive Protein (CRP)	human body fluid
A0710	CA 19-9 antigen	human serum
A1482	CA128	cell culture
A0715-1	CA19-9	cell culture
A0301	Calmodulin	human brain
A0303	Calmodulin	bovine brain
A0304	Calprotectin	recombinant
A0305	Cancer antigen CA 72-4	human fluid
A0310-1	Cathepsin D	human liver
A0310-2	Cathepsin D	human liver
A0311	Cathepsin G	human neutrophil
A0315-1	CEA	human fluids
A0315-2	CEA	h.fluid/metastatic liver
A0316-1	CEA	cell culture
A0318	Centromere B human	recombinant
A0320	Ceruloplasmin	human plasma
A0321	Chagas antigen	recombinant
A0398	Chlamydia	cell culture
A0323	Cholesterol concentrate	human plasma
A0324	Cholinesterase	human plasma
A0325	Human Chorionic Gonadotrophin (hCG)	human urine
A0326	beta hCG	human plasma
A0335	Chylomicrons	human plasma
A0348	CK-BB	human brain
A0350-1	CK-MB	human heart
A0350-2	CK-MB	human heart
A0355-1	CK-MM	hum. skeletal muscle
A0397	CMV	cell culture
A0364	Collagen Type IV	human placenta
A0367	Complement C1	human serum
A0365	Complement C3	human serum

C

4 ANTIGENS & ANTIBODIES | ANTIGENS

IVD manufacturing | R&D

Code	Specificity	Source
A0366-1	Complement C4	human serum
A0366-2	Complement C4	human serum
A0375	Corticosteroid Binding Globulin	human serum
A0396	Cyfra 21-1	cell line
A0390	Cystatin C	human
A0391	Cystatin C	recombinant
A0395-2	Cytokreatin 19 Antigen	cell culture

D	A0405	D-Dimer	human plasma
	A0412	Dengue	cell culture
	A0413	ds-DNA	bacteria plasmid

E	A0540	Elastase	pig pancreas
	A0521	Epidermal Growth Factor, human	recombinant
	A0522	Epidermal Growth Factor, mouse	submaxillary glands
	A0530	Eosinophil Cationic Protein (ECP)	human eosinophils

F	A0600	Fatty Acid Binding Protein	heart tissue
	A0605	Ferritin	human liver
	A0606	Ferritin	human spleen
	A0607	Ferritin	human heart
	A0608	Ferritin	human placenta
	A0630	Folate binding protein	bovine milk
	A0640-1	Follicle-Stimulating Hormone	human pituitary glands
	A0640-2	Follicle-Stimulating Hormone	human pituitary glands
	A0680	Factor XIII	human

G	A0728	gamma Glutamyl Transpeptidase	human liver
	A0710-1	Gastro intestinal (GI) CA 19-9	human fluids
	A0710-2	Gastro intestinal (GI) CA 19-9	human fluids
	A0710-3	Gastro intestinal (GI) CA 19-9	human adenocarcinoma cell line
	A0715-2	Gastro intestinal (GI) CA 19-9	cell culture
	A0722	Glial Fibrillary Acidic Protein	human brain
	A0729	Glutamate Oxaloacetate Transaminase (GOT)	human liver
	A0730	Glutamate pyruvate Transaminase (ALT)	human liver
	A0737	GM1-Asialo	human brain



A0720	GP41, HIV peptide sequence	synthetic
A0735	Growth Hormone	human pituitary glands
A0736	Growth Hormone (human)	recombinant DNA
A0739	GBM	recombinant

A0805	Haptoglobin	human serum
A0815	HAV antigen	Lysate
A0824	HBsAg antigen subtype AD	recombinant
A0823	HBsAg antigen subtype AY	recombinant
A0893	HCV	E.coli
A0894	Helicobacter pylori	cell culture
A0897	Hemoglobin A1c, > 96%	human erythrocytes
A0808	Hemoglobin	lyophilized red cells
A0809-1	Hemoglobin A1c, 10.0%	human erythrocytes
A0809-2	Hemoglobin A1c, 15.0-16.0%	human erythrocytes
A0809-3	Hemoglobin A1c, 3.0-4.0%	human erythrocytes
A0810	Hemoglobin base, free of A1c	human erythrocytes
A0820	Hepatitis B "e" Antigen	recombinant
A0821	Hepatitis B "c" Antigen	recombinant
A0825	Hepatitis B "s" Antigen	recombinant
A0830	Hepatitis B "s" Antigen	human plasma
A0840	Hepatitis B "s" Antigen, subtype AD	human plasma
A0841	Hepatitis B "s" Antigen, subtype AD inactivated	human plasma
A0842	Hepatitis B "s" Antigen, subtype ADR inactivated	human plasma
A0835	Hepatitis B "s" Antigen, subtype AY	human plasma
A0836	Hepatitis B "s" Antigen, subtype AY inactivated	human plasma
A0895	Hepatocyte Growth Factor (HGF)	recombinant
A0890	HTLV-I	E.coli
A0891	HTLV-II	E.coli
A0892	Hirudin	recombinant
A0896	HIV	recombinant

A0915-3L	IgA Lambda Myeloma	human Serum
A0954	IGF1	E.coli
A0921-3L	IgG1 Lambda Myeloma	human serum
A0927-3K	IgM Kappa Myeloma	human serum
A0927-3L	IgM Lambda Myeloma	human plasma

4 ANTIGENS & ANTIBODIES | ANTIGENS

IVD manufacturing | R&D

	Code	Specificity	Source
I	A0915-2	Immunoglobulin A	human serum
	A0915-3	Immunoglobulin A	human serum
	A0915-1S	Immunoglobulin A, SP	human Serum
	A0916	Immunoglobulin A, Subclass 2	human serum
	A0919-1	Immunoglobulin E	human serum
	A0919-3	Immunoglobulin E	myeloma
	A0215	Immunoglobulin G	bovine serum
	A0920	Immunoglobulin G	rabbit serum
	A0921-1	Immunoglobulin G	human serum
	A0922	Immunoglobulin G	mouse
	A0923	Immunoglobulin G	sheep serum
	A0921-3K	Immunoglobulin G1 Kappa	human serum
	A0924	Immunoglobulin Kappa	human urine
	A0924-2	Immunoglobulin Kappa, semi	human urine
	A0924-1S	Immunoglobulin Kappa, SP	human urine
	A0925	Immunoglobulin Lambda	human urine
	A0925-1S	Immunoglobulin Lambda, SP	human urine
	A0925-2	Immunoglobulin Lambda,semi	human urine
	A0927-1	Immunoglobulin M	human serum
	A0928	Immunoglobulin M whole Myeloma	human serum
	A0929	Gammaglobulin	human serum
	A0931	Influenza B	cell culture
	A0951	IGFB Protein 1	human fluid
	A0953	IGFB Protein 3	human fluid
	A0958	Interleukin-2 Receptor	human cell expressed
	A0959	Interleukin-2 Receptor	E.coli
	A0960	Interleukin-3, human	recombinant
	A0961	Interleukin-4, human	recombinant
	A0988	Insulin	recombinant
J	A1014	Jo-1	calf thymus
	A1012	Japanese encephalitis Antigen	recombinant
L	A1101	La (SS-B) human	recombinant
	A1120	Lipase	human brain
	A1121	Lipase	human pancreas



A1130	Lipoprotein a (Lp-a)	human plasma	L
A1160-1	Luteinizing Hormone	human pituitary glands	
A1160-2	Luteinizing Hormone	human pituitary glands	
A1161	Luteinizing Hormone	recombinant	
A1165	Lysozyme	human urine	

A1200	Measles	cell line	M
A1258	Malaria Antigen	recombinant	
A1260	Myeloperoxidase (pANCA)	human neutrophil	
A1270	Myoglobin	human heart muscle	
A1275	Myosin light chain 1, ventricular	human heart left ventricles	
A1280	Mycoplasma	human serum	

A1330	Nerve Growth Factor	bovine seminal	N
A1340	Neuron Specific Enolase	human brain	
A1350	Neutrophil Elastase Grade 1	human neutrophil	
A1345	Non-neuronal Enolase (NNE)	human brain	
A1370	NT-pro BNP	recombinant	
A1371	N-GAL	human leukocytes	
A1340	NSE	recombinant	

A1470	Osteocalcin	bovine bone	O
A1480-1	Ovarian Cancer CA-125	human fluids	
A1480-2	Ovarian Cancer CA-125	human fluids	
A1485	Ovarian Cancer Antigen (CA-125)	ovarian carcinoma cell line	

A1502	Parainfluenza 2	cell culture	P
A1503	Parainfluenza 3	cell culture	
A1505	Parietal Cell Antigen	porcine	
A1506	Parvo B19	cell culture	
A1510	Pepsinogen I	human mucosa	
A1515	Pepsinogen II	human mucosa	
A1530	Placental Lactogen	human placenta	
A1539	Plasminogen	human plasma	
A1543	Platelet Factor IV	human plasma	
A1570	Prealbumin	human serum	
A1573	PAPP-A	retroplacental serum	

4 ANTIGENS & ANTIBODIES | ANTIGENS

IVD manufacturing | R&D

	Code	Specificity	Source
P	A1580	Prolactin, recombinant	cell culture
	A1581	Prolactin	human pituitary gland
	A1585-1	Prostata Specific Antigen (PSA) HP	human fluids
	A1585-2	Prostate Specific Antigen (PSA) PP	human fluids
	A1586	PSA-ACT Complex	seminal fluid
	A1590-1	Prostatic Acid Phosphatase (PAP) HP	human seminal plasma
	A1590-2	Prostatic Acid Phosphatase (PAP) PP	human seminal plasma
	A1591	Protein C	human plasma
	A1595	Proteinase 3 (cANCA)	human neutrophil
	A1596	Protein S	human plasma
	A1597	Prothrombin	human plasma
	A1598	Activated Protein C	human plasma
	A1599	Podocalyxin	human plasma
	A1600	Procalcitonin, recombinant	cell culture
R	A1709	Renin human, recombinant	cell culture
S	A1803	Scl-70	rabbit thymus
	A1812	Sm/RNP	calf thymus
	A1813	Sm	calf thymus
	M1802	S-100 Protein	mouse
	A1814	SS-A (ro) Antigen	bovine spleen/thymus
	A1815	SS-A (ro)-52 Antigen, recombinant	E.coli
	A1816	SS-A (ro)-60 Antigen, recombinant	E.coli
	A1101	SS-B (La)	recombinant
	A1820	Serum Amyloid Amylase	human fluids
	A1821-1	Serum Amyloid Amylase	human serum
	A1821-2	Serum Amyloid Amylase	human serum
	A1825	Serum Amyloid Protein	human serum
	A1830	Sex Hormone Binding Globulin	human pregnancy serum
	A1840	Somatostatin 1-28	synthetic
	A1850	Streptavidin	streptomyces avidinii
	A1860	Streptolysin O	cell culture



A1920	Thrombin (alpha)	human plasma
A1921	Thrombin	bovine
A1922	Thrombomodulin	human plasma
A1925	Thyroglobulin	human thyroid glands
A1928-1	TPO Thyroid Peroxidase	thyroid tissue
A1930	Thyroid Microsomal Antigen	human thyroid tissue
A1932-1	Thyroid Stimulating Hormone	human pituitary glands
A1932-2	Thyroid Stimulating Hormone	human pituitary glands
A1934	TPO Thyroid Peroxidase, recombinant	baculovirus
A1935	Thyroxine Binding Globulin	human serum
A1940	Tissue Polypeptide Antigen (TPA)	cell culture
A1950	Transferrin	human plasma
A1950-S	Transferrin	human plasma
A1951	Transferrin Receptor	human placenta
A1953	Transferrin Receptor	human plasma
A1955	CDT (Carbohydrate Deficient Transferrin)	human serum
A1956	CDT free Transferrin	human serum
A1957	Triglyceride	chicken egg protein
A1958	Troponin C recombinant	E.coli
A1959	Troponin C	human heart
A1960	Troponin C subunit (skeletal)	rabbit skeletal muscle
A1961	Troponin I (cardiac)	human heart
A1962	Troponin I (skeletal)	human skeletal muscle (pec)
A1963	Troponin I (cardiac)	bovine heart
A1964	Troponin T	human heart tissue
A1965	Troponin Complex Antigen	human heart tissue
A1970-1	Treponema Pallidum	rabbit testicle
A1970-2	Treponema Pallidum	rabbit testicle
A1971	Treponema Pallidum, rec. , 47 kDa	E.coli
A1972	Treponema Pallidum, rec. 15, 17 kDa	E.coli
A1973	Treponema TmpA recombinant	E.coli
A1975	Toxoplasma gondii lysate Antigen	vero cell line
A1976	Tissue from thyroid gland	thyroid gland

T

A2040	Urine Protein 1	human urine
A2045	Urinary Trypsin Inhibitor	human urine

U

4 ANTIGENS & ANTIBODIES | ANTIBODIES

PAb / MAb production

TRINA data sheets for all codes available at TRINA BIOREACTIVES. All of our antigens are produced according to internal SOP or customer specified procedures. Starting materials of our antigens are tested for virus markers by FDA / CE tests. Virus positive antigens are inactivated.

- In bulk for diagnostic, manufacturing and research

	Polyclonal Antibody Production (PAb) Qualitative detection (e.g., Western blotting) Low uniformity Limited quantities Multiple host species options	Monoclonal Antibody Production (MAb) Quantitative assays (e.g., sandwich ELISA) High uniformity Unlimited quantities Two host species options
Peptide Antigen (P)	PPAb Lowest cost Medium specificity Broad assay utility	PMAb Medium cost Highest specificity Narrow assay utility
Recombinant Protein Antigen (R)	RPAb Medium cost Low specificity Broadest assay utility	RMAb Highest cost High specificity Limited assay utility



TRINA data sheets for all codes are available at TRINA BIOREACTIVES.

Monoclonals / polyclonals are available purified or in ascites according to customer request and pending on specificity.

In bulk for diagnostic manufacturing and research.

Code	Specificity	Source
P0116	anti-Human Alpha fetoprotein IgG fraction	rabbit
M0116	anti-Human Alpha fetoprotein, monoclonal	mouse
P0117	anti-Human Alpha fetoprotein, affinity purified	goat
P0120	anti-Human Alpha-1-acid Glycoprotein	goat
P0122	anti-Human Apolipoprotein A-1	goat
P0123	anti-Human Albumin	goat
P0124	anti-Human Apolipoprotein B	goat
P0127	anti-Human Apolipoprotein E	goat
M0130	anti-Human ACE	mouse
M0131	anti-Human AMP	mouse

A

M0212	anti-Human beta-2-microglobulin, monoclonal	mouse
P0212	anti-Human beta-2-microglobulin, affinity purified	rabbit
P0213	anti-Human beta-2-microglobulin, IgG fraction	rabbit
P0215	anti-Human beta-2-microglobulin	goat
P0216	anti-Human beta-2-microglobulin, IgG fraction	goat
P0220	anti-biotin IgG fraction	sheep
P0222	anti-biotin affinity purified	goat
M0240	anti-Human BZO	mouse
M0241	anti-Human BUP	mouse

B

P0305	anti-Human CEA	rabbit
M0305	anti-Human CEA, monoclonal	mouse
M0310	anti-Human CK-MB, monoclonal	mouse
P0311	anti-Human CK-BB, affinity purified	rabbit
P0312	anti-Human CK-MM	goat
P0313	anti-Human hCG	rabbit
M0313	anti-Human hCG intact, monoclonal	mouse
P0314	anti-Human alpha hCG	rabbit
M0314	anti-Human alpha hCG, monoclonal	mouse
P0315	anti-Human beta hCG, affinity purified	rabbit

C

4 ANTIGENS & ANTIBODIES | ANTIBODIES

IVD manufacturing | R&D

Code	Specificity	Source
M0315	anti-Human beta hCG, monoclonal	mouse
P0316	anti-Human beta hCG, affinity purified	sheep
M0317	anti-Human CRP, monoclonal	mouse
P0319	anti-Human CRP, IgG fraction	rabbit
P0320	anti-human Complement 3	goat
P0321	anti-human Complement 4	goat
M0330	anti-human Corticoliberin, monoclonal	mouse
M0331	anti-Cortisol, monoclonal	mouse
M0360	anti-Cytokeratins [1-19], monoclonal	mouse
M0370	anti-CMV, IEA, monoclonal	mouse
M0381	anti-human COC	mouse
P0390	anti-human Cystatin C	goat

D	M0404	D-Dimer	mouse
	M0405	anti-15K allergen House Dust Mite, Dermatophagoides farinae, excretion (Dfa)	mouse
	M0409	anti-Diphtheria toxin, monoclonal	mouse
	M0410	anti-Diphtheria toxin A subunit, monoclonal	mouse

E	P0560	anti-human E.Coli	goat
	M0515	anti-Epstein Barr Virus, monoclonal	mouse
	P0524	anti-Estradiol E2	rabbit
	M0525	anti-17 β -Estradiol, monoclonal	mouse
	P0526	anti- β Estradiol	goat
	M0531	anti-human to E.histolytica	mouse
	M0540	anti-human to EDDP	mouse

F	M0618	anti-human alpha FSH, monoclonal	mouse
	M0619	anti-human beta FSH, monoclonal	mouse
	M0625	anti-F1 antigen Yersinia pestis, monoclonal	mouse
	P0650	anti-human Ferritin, affinity purified	goat
	P0651	anti-human Ferritin, affinity purified	rabbit
	M0660	anti-Filaggrin + Profilaggrin, monoclonal	mouse

G	M0726	Galectin 3	mouse
	M0709	Gastro Intestinal tumor, monoclonal	mouse ascites



P0709	anti-human GI antigen, affinity purified	rabbit
P0710	anti-human GI antigen, affinity purified	sheep
P0711	anti-human GI antigen, IgG fraction	rabbit
M0720	anti-Granular layer kreatinocytes (GL-S2) monoclonal	mouse
M0725	anti-human Growth Hormone, monoclonal	mouse

M0800	anti-human HAV, monoclonal	mouse
P0801	anti-HBsAg	goat
M0802	anti-human HBsAg, monoclonal	mouse
P0803	anti-HBsAg, affinity purified	goat
M0803	anti-rHBsAg (ayw subtype), monoclonal	mouse
P0804	anti-HBsAg	rabbit
M0804	anti-human HBcAg, monoclonal	mouse
M0805	anti-rHBeAg, monoclonal	mouse
M0840	anti-Helicobacter pylori, monoclonal	mouse
M0850	anti-HSV, monoclonal	mouse
M0860	anti-Histones, monoclonal	mouse
M0859	anti-Hemoglobin	monoclonal
P0861	anti-human Hemoglobin	sheep
P0862	anti-human Hemoglobin	goat
P0862-1	anti-human Hemoglobin, affinity pure	goat
M2011	anti-HbA1c	monoclonal
P0863	anti-human Hemoglobin	rabbit
P0864	anti-HBsAg, affinity pure	horse
P0313	anti-human hCG	rabbit
M0313	anti-human hCG intact, monoclonal	mouse
P0314	anti-human alpha hCG, polyclonal	rabbit
M0314	anti-human alpha hCG, monoclonal	mouse
M0315	anti-human beta hCG, monoclonal	mouse
P0316	anti-human beta hCG, affinity purified	sheep

M0901	anti-human IgA, monoclonal	mouse
P0901	anti-human IgA	goat
P0903	anti-human IgD	goat
M0905	anti-human IgE, monoclonal	mouse
P0905	anti-human IgE	goat
P0906	anti-human IgG (Fc specific)	goat

4 ANTIGENS & ANTIBODIES | ANTIBODIES

IVD manufacturing | R&D

	Code	Specificity	Source
I	M0907	Immunoglobulin G1 monoclonal	mouse
	P0907	anti-human IgG	goat
	M0908	Immunoglobulin G2 monoclonal	mouse
	P0908	anti-mouse IgG	goat
	M0909	Immunoglobulin G3 monoclonal	mouse
	M0910	Immunoglobulin G4 monoclonal	mouse
	M0911	anti-human IgM, monoclonal	mouse
	P0911	anti-human IgM	goat
K	M1001	anti-human Kappa light chains, monoclonal	mouse
	P1001	anti-human Kappa light chain	goat
	M1002	anti-human free Kappa light chains, monoclonal	mouse
	M1010	anti-Keratinocyte membrane, monoclonal	mouse
	M1020	anti-human Ketamine	mouse
L	M1100	anti-human Lactoferrin, monoclonal	mouse
	M1101	anti-human Lambda light chains, monoclonal	mouse
	P1101	anti-human Lambda light chain	goat
	M1102	anti-human free Lambda light chains, monoclonal	mouse
	M1105	anti-legionella pneumonophila	mouse
	M1107	anti-human LH, monoclonal	mouse
	M1108	anti-human alpha LH, monoclonal	mouse
	M1109	anti-human beta LH, monoclonal	mouse
	M1124	anti-LPS Francisella tularensis, monoclonal	mouse
	P1126	anti-human LP (a)	goat
M	M1811	Malaria antibody	monoclonal
	M1201	anti-human Mannan Binding Protein, monoclonal	mouse
	M1217	anti-human MPO	mouse
	P1217	anti-human MPO	rabbit
	P1223	anti-human Myoglobin	goat
	M1223	anti-human Myoglobin, monoclonal	cell culture
	M1223-1	anti-human Myoglobin, monoclonal	mouse
	P1224	anti-human Myoglobin, IgG fraction	rabbit
	P1225	anti-human Myoglobin	rabbit
	M1250	anti-human Myosin, monoclonal	mouse



P1250	anti-human Myosin, affinity purified	goat	M
P1260	anti-human MET	mouse	
P1261	anti-human MOP	mouse	

P1304	anti-human Neuron Specific Enolase	sheep	N
M1304	anti-human Neuron Specific Enolase, monoclonal	mouse	
P1305	anti-human Neuron Specific Enolase	rabbit	

P1420	anti-human OvCan antigen, IgG fraction	rabbit	O
P1421	anti-human OvCan antigen, affinity purified	rabbit	
P1450	anti-human Opi	mouse	
P1451	anti-human OXY	mouse	

M1510	anti-human Plasminogen Activator Inhibitor-1, monoclonal	mouse	P
M1511	anti-human Plasminogen, monoclonal	mouse	
P1512	anti-human Plasminogen, IgG fraction	goat	
M1520	anti-human Pregnancy, Specific b-1-Glycoprotein, monoclonal	mouse	
P1520	anti-human Prealbumin	goat	
M1530	anti-human Progesterone, monoclonal	mouse	
P1530	anti-human Progesterone	rabbit	
M1545	anti-human Proinsulin, monoclonal	mouse	
M1550	anti-human Prolactin, monoclonal	mouse	
P1555	anti-human Prostaglandin E2	rabbit	
M0670	free PSA Ab	mouse	
P1560	anti-human PSA, affinity purified	goat	
P1561	anti-human PSA	goat	
P1562	anti-human PSA, IgG fraction	rabbit	
M1563	anti-human PSA, monoclonal	mouse	
M1565	anti-human Pepsinogen I, monoclonal	mouse	
M1566	anti-human Pepsinogen II, monoclonal	mouse	
M1568	anti-PIVKA II, monoclonal	mouse	
M1570	anti-human Procalcitonin, monoclonal	mouse	
M1580	anti-human PPX	mouse	
M1581	anti-human PCP	mouse	

M1701	anti-Rabies, monoclonal	mouse	R
P1756	anti-human RBP	goat	
M1714	anti-Rotavirus group specific antigen, monoclonal	mouse	

4 ANTIGENS & ANTIBODIES | ANTIBODIES

IVD manufacturing | R&D

	Code	Specificity	Source
S	M1802	S-100 Protein	mouse
	M1801	anti-Salmonella typhimurium, monoclonal	mouse
	M1805	anti-Sex Hormone Binding Globulin, monoclonal	mouse
	M1850	anti-Streptavidin, monoclonal	mouse
T	M1904	anti-Testosterone, monoclonal	mouse
	P1910	anti-recombinant TSH, affinity pure	goat
	M1910	anti-human TSH, monoclonal	mouse
	P1911	anti-human TSH	sheep
	P1912	anti-human beta-TSH, affinity pure	goat
	M1914	anti-human Thyroxine (T4), monoclonal	mouse
	P1914	anti-human Thyroxine (T4)	sheep
	M1915	anti-human Thyroglobulin, monoclonal	mouse
	P1915	anti-human TG	goat
	M1920	anti-human Thyroxid peroxidase, monoclonal	mouse
	M1925	anti-human Tissue plasminogen activator, mab	mouse
	M1928	anti-Toxoplasma gondii, monoclonal	mouse
	M1930	anti-human Transferrin, monoclonal	mouse
	P1930	anti-Human Transferrin	goat
	M1931	anti-Human Transferrin Receptor, monoclonal	mouse
	M1940	anti-Treponema Pallidum, monoclonal	mouse
	M1945	anti-Trichomonas vaginalis, monoclonal	mouse
	M1950	anti-Human Triiodothyronine (T3), monoclonal	mouse
	P1950	anti-Human Triiodothyronine (T3)	sheep
	P1951	anti-Human Triiodothyronine (T3)	rabbit
	P1953	anti-Human Thyroxine (T4)	rabbit
	M1970	anti-Human Troponin I, cardiac, monoclonal	mouse
	M1971	anti-Human Troponin I, skeletal muscle, mab.	mouse
	M1980	anti-Human Troponin T, cardiac, monoclonal	mouse
	P1980	anti-Human Troponin T, affinity purified	goat
	P1985	anti-Human Tuberculosis	sheep
	M1990	anti-Human alpha Tumor Necrosis Factor, mab.	mouse
	P1925	anti-Human THC	mouse
	M1993	anti-Human TRA	mouse
V	M2209	anti-Verotoxin 1, monoclonal	mouse
	M2210	anti-Verotoxin 2, monoclonal	mouse



0 OEM MANUFACTURING

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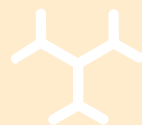
Glycated Hemoglobin A1c 138

Special Diabetes 139

HbA1c Liquid Control / Verification 140

7 PROFICIENCY TESTING

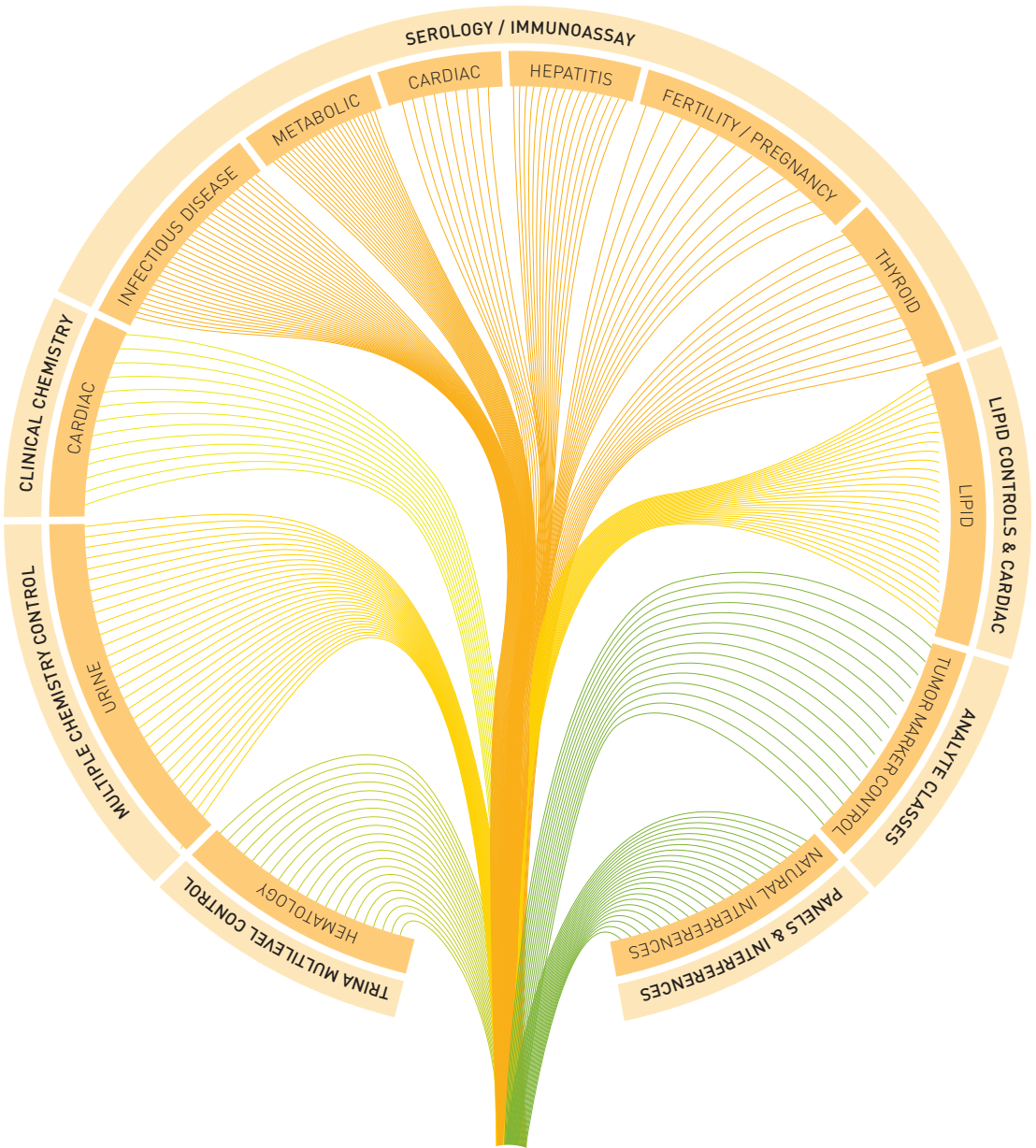
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OEM

MANUFACTURING



TRINA
CONTROLS & CALIBRATORS

controls | calibrators

OEM Manufacturing

TRINA Manufactures customized bulked and vialled controls, calibrators and panels. Through our scalable and lean production design, we ensure low cost and consistency in many IVD supply chains worldwide. Our strength lies in the customization and adaption of each product, while having an unrivaled access to raw materials, antigens, plasmas and components.

1. Human Plasma / Serum

- Characteristics: Matrix, Population, Regulatory
- Titer: Assay / Subtyping / IgG / IgM / Viral load / Antigen load

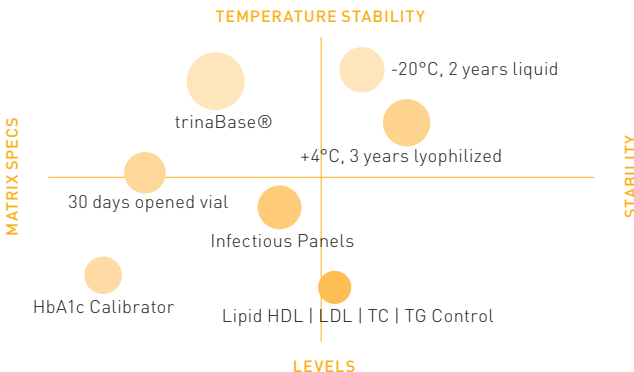
2. Processed Plasma

- Filter Method
- Buffer
- Antimicrobial / Antifungal Agents
- Proprietary Stabilization
- Heat treatments
- Processing Method
- Defibrination
- Delipidation
- Dialyse
- Level adjustment

3. Controls / Calibration / Proficiency testing / Panels

- Natural Enzyme immobilization
- Protease Inhibitors
- Stability Data
- Vial Selection
- Additives / Antioxidants
- Additives for Lyophilization / Liquid Stability
- Cryoprotectants

Aliquot Volume / Vial / Packaging





clinical | controls | calibrators | panels | proficiency testing

Intended Use of TRINA OEM and Bulk Products

All Products are intended and designed as OEM products for IVD Manufacturers, large laboratories and for further manufacturing. The Products are designed to provide an unbiased, independent performance assessment for diagnostic devices or systems and is manufactured independently.

Reagent Compositions

All Products are intended and designed as raw bulk, semi-finished Controls or OEM products for IVD Manufacturers, large laboratories and for further manufacturing. The Products are designed to provide an unbiased, independent performance assessment for diagnostic devices or systems and is manufactured independently.

OEM Aliquoted / vialod

HbA1c Control	CD0809
Rubella IgM Performance Panel	DV1000-P
CRP Levels	CD1170
Interferences	CD8120
TC / TG / HDL / LDL Control	CL1130
ASO / RF / CRP Control	IC2351

Stabilized control

Enzyme free Serum	SP1840
RF. positive Diluent	CD1780
TRINABase® II	SP1811
IgE free Serum	SP1844
A-HBs neg Basematrix	SP1833

Serum bulk matrix

Male only, TRINABase®	SP0819
Toxo IgM Control	DP1000
BCC - stabilized	CT1120
Ferritin Free serum	SP1836
T3 / T4 stripped serum	SP1852

OEM controls & calibrators

Multiple Chemistry Control, Lyophilized

Assigned Values and Ranges (Representative Values)

Special Chemistry

Analyte	Unit	Low	High
Iron	mcg/dl	4.75-5.25	285-315
UIDC/TIBC	mg/dl	450	20
Cholesterol	mg/dl	9.5-10.5	665-735
Triglycerides	mg/dl	9.5-10.5	855-945
HDL, direct	mg/dl	9.5-10.5	114-126
LDL homo	mg/dl	9.5-10.5	475-525
hsCRP	mg/L	0.475-0.525	14.25-15.75

Immuno Chemistry

Cortisol	mcg/dl	0.95-1.05	57-63
C-Peptide	ng/ml	0.475-0.525	23.75-26.25
Ferritin	ng/ml	9.5-10.5	665-735
Folate	ng/ml	0.95-1.05	19-21
FSH	mIU/ml	0.95-1.05	142.5-157.5
hCG	mIU/ml	4.75-5.25	285-315
Insulin	mcU/L	0.95-1.05	237.5-262.5
LH	mIU/ml	0.95-1.05	166.25-183.75
Prolactin	ng/ml	0.95-1.05	166.25-183.75
T3 Total	ng/ml	0.475-0.525	5.7-6.3
T4 Total	mcg/dl	0.95-1.05	23.75-26.25
TSH	mIU/ml	0.095-0.105	47.5-52.5
Vitamin B12	pg/ml	71.25-78.75	1425-1575
Troponin I	ng/ml	0.095-0.105	28.5-31.5

Hematology

Hemoglobin	fl/dl	2.375-2.625	22.8-252
Platelets	K/cumm	9.5-10.5	950-1050
RBC	x10A6/cu	0.95-1.05	7.6-8.4
WBC	K/cumm	0.475-0.525	95-105

Whole Blood

HbA1c	%	4.75-5.25	11.1-12.6
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Multiple Chemistry Control, Lyophilized

Assigned Values and Ranges (Representative Values), Expiration Date:

Urine

Analyte	Unit	Low	High
Albumin	mg/dl	1.425-1.515	23.75-26.25
Chloride	mEq/L	52.25-57.75	190-210
Creatinine	mg/dl	4.75-5.25	237.5-262.5

Chemistry

Albumin	g/dl	2.375-2.625	6.65-7.35
ALP	U/L	19-21	475-525
ALT	U/L	4.75-5.25	285-315
Amylase	U/L	9.5-10.5	475-525
AST	U/L	4.75-5.25	285-315
Bilirubin Direct	mg/dl	0.1-0.105	2.85-3.15
Bilirubin Total	mg/dl	0.285-0.315	9.5-10.5
Calcium	mg/ml	0.95-1.05	14.25-15.75
Chloride	mEq/L	76-84	133-147
CK	U/L	9.5-10.5	1425-1575
Creatinine	mg/dl	0.95-1.05	9.5-10.5
GGT	U/L	4.75-5.25	475-525
Glucose	mg/dl	28.5-31.5	475-525
LD	U/L	47.5-52.5	855-945
Magnesium	mEq/L	0.475-0.525	3.325-3.675
Phosphate	mg/dl	0.95-1.05	14.25-15.75
Potassium	mEq/L	1.5-1.65	7.6-8.4
Sodium	mEq/L	80.75-89.25	180.5-199.5
Total Protein	g/dl	4.275-4.725	11.4-12.6
Urea	mg/dl	3.8-4.2	142.5-157.5
Uric Acid	mg/dl	0.95-1.05	19-21

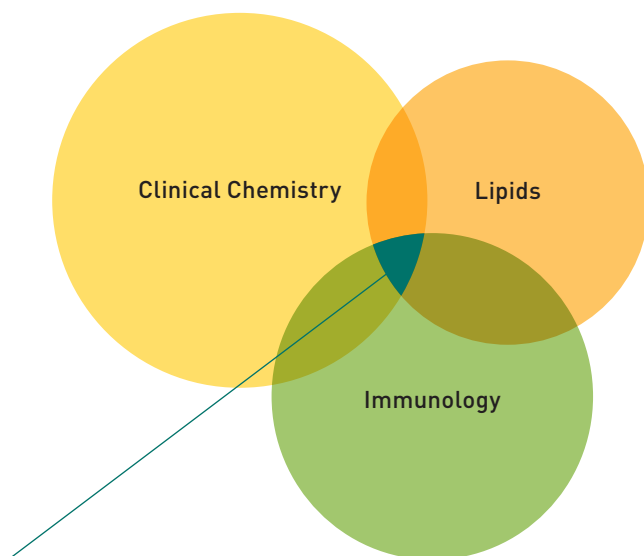
- Single / multi analyte formulated for manual & automated platforms
- Liquid, ready to use or lyophilized for long term storage
- 0.2ml - 10ml vials, liquid, frozen or lyophilized, labeled

clinical | controls | calibrators | panels | proficiency testing

- Single / multi analyte
- 3 years shelf life at -20°C to -80°C or 2–8°C
- Thawed and unopened stability for over 30 days at 2–8°C
- 14 day open-vial stability at 2–8°C for most analytes
- Formulated for manual and automated platforms
- Liquid, ready to use or lyophilized for long term storage
- 0.2 ml - 10 ml vials, liquid, frozen or lyophilized, labeled

Analyte classes:

- General Chemistry Controls / Calibrators
- Tumor & Cardiac
- Infectious and Disease State
- Speciality Controls
- Coagulation
- Diabetes Monitoring
- Proficiency testing



Customized Controls

1 ml vials | liquid stabilized | frozen, 4–levels

1 GENERAL CHEMISTRY



OEM controls & calibrators

Lipid Chemistry and Lipid Control, with Human Lipids

High quality human based lipid control. Ready to use.

Analyte, Units	Mean	Range	Mean	Range
Albumin g/dL	2.8	2.2 – 3.4	4.5	3.4 – 5.5
Alkaline Phosphatase [ALP] U/L	98	73 – 122	394	296 – 493
ALT/SGPT U/L	49	38 – 61	186	143 – 229
Amylase, Pancreatic U/L	76	56 – 96	303	263 – 343
Asp. Aminotransferase [AST/SGOT] U/L	87	67 – 107	299	230 – 368
Bilirubin – Direct mg/dL	0.6	0.2 – 1.0	1.8	1.3 – 2.2
Bilirubin – Total mg/dL	1.4	1.0 – 1.8	4.2	3.1 – 5.3
BUN (Urea Nitrogen) mg/dL	22	17 – 27	53	48 – 58
Calcium Total mg/dL	7.9	6.9 – 8.9	11.8	10.5 – 13.1
Carbon Dioxide [CO ₂] mmole/L	12	7 – 17	28	22 – 34
Chloride mmole/L	101	92 – 111	118	107 – 128
HDL Cholesterol mg/dL	41	33 – 49	64	51 – 77
Total Cholesterol mg/dL	151	130 – 172	267	229 – 304
Creatine Kinase [CK] U/L	195	156 – 234	731	585 – 878
Creatinine mg/dL	1.6	1.0 – 2.2	5.4	4.2 – 6.6
GGT U/L	46	36 – 56	200	156 – 244
Glucose mg/dL	76	64 – 88	290	243 – 336
Lactate mmol/L	1.79	1.51 – 2.08	4.14	3.47 – 4.80
Lactate Dehydrogenase [LDH] U/L	130	107 – 154	484	397 – 571
Magnesium mg/dL	1.6	1.3 – 1.9	4.6	3.9 – 5.4
Phosphorus mg/dL	2.8	2.3 – 3.3	6.3	5.2 – 7.4
Potassium mmole/L	3.3	2.8 – 3.8	6.6	6.0 – 7.2
Protein, Total g/dL	5.0	4.5 – 5.5	7.6	6.9 – 8.4
Sodium mmole/L	133	125 – 141	161	152 – 171
Triglycerides mg/dL	144	118 – 170	290	238 – 342
Uric Acid mg/dL	3.8	3.2 – 4.3	10.6	9.1 – 12.1
CRP mg/L	40	34 – 45	128	110 – 146



OEM controls & calibrators

Lyophilized Chemistry Control

Very stable clinical chemistry control to cover most laboratory QC requirements.
Any given analytes can be added to cumstomize your control.

No	Analytes	Unit	L1 Target	L2 Target
1	a-HBDH	U/L	140	400
2	ALB	g/L	42	30
3	ALP	U/L	120	300
4	ALT	U/L	25	250
5	AMY	U/L	50	250
6	AST	U/L	25	250
7	Ca	mmol/L	1.5	2.8
8	CHE	U/L	6000-8000	2000-3000
9	CHOL	mg/dL	220	110
10	CK	U/L	100	300
11	Cl	mmol/L	120	95
12	CO2	mmol/L	30	15
13	Copper	umol/L	20	10
14	Crea	mg/dL	1	5
15	DBIL	mg/dL	0.5	2
16	GGT	U/L	40	200
17	GLU	mg/dL	60	300
18	HDL	mg/dL	70	30
19	Iron	ug/dL	190-290	50-70
20	K	mmol/L	2.5	5.5
21	Lactate	mg/dL	50	15
22	LDH	U/L	130	300
23	LDL	mg/dL	110	50
24	Lipase	U/L	50	300
25	Lithium	mmol/L	0.5	2
26	Mg	mmol/L	0.6	2
27	Na	mmol/L	150	120
28	P	mmol/L	1	3
29	TBA	umol/L	15	120
30	TBIL	mg/dL	0.8	5

1 GENERAL CHEMISTRY | CHEMISTRY & LIPID LINEARITY

OEM controls & calibrators

Chemistry & Lipid Linearity Calibration / Verification

Analyte	Unit	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
ALT	U/L	2	185.0	368.0	551.0	734.0	917.0	1100
ALB	g/L	15	24.2	33.3	42.5	51.7	60.8	70
ALP	U/L	10	191.7	373.3	555.0	736.7	918.3	1100
Tbil	umol/L	2	51.7	101.3	151.0	200.7	250.3	300
Dbil	umol/L	1	25.8	50.7	75.5	100.3	125.2	150
Ca	mmol/L	1	1.7	2.3	3.0	3.7	4.3	5
Cl	mmol/L	50	71.7	93.3	115.0	136.7	158.3	180
CK	U/L	2	185.0	368.0	551.0	734.0	917.0	1100
Crea	umol/L	10	175.0	340.0	505.0	670.0	835.0	1000
GGT	U/L	2	185.0	368.0	551.0	734.0	917.0	1100
GLU	mmol/L	1	5.8	10.7	15.5	20.3	25.2	30
LDH	U/L	2	185.0	368.0	551.0	734.0	917.0	1100
Mg	mmol/L	0.3	0.8	1.2	1.7	2.1	2.6	3
P	mmol/L	0.4	1.0	1.6	2.2	2.8	3.4	4
K	mmol/L	2	3.0	4.0	5.0	6.0	7.0	8
TP	g/L	40	50.0	60.0	70.0	80.0	90.0	100
Na	mmol/L	110	123.3	136.7	150.0	163.3	176.7	190
Urea	mmol/L	1	5.8	10.7	15.5	20.3	25.2	30
UA	umol/L	10	175.0	340.0	505.0	670.0	835.0	1000
Chol	mmol/L	2	4.2	6.3	8.5	10.7	12.8	15
TG	mmol/L	0.5	1.8	3.0	4.3	5.5	6.8	8
HDL	mmol/L	0.5	1.8	3.0	4.3	5.5	6.8	8
LDL	mmol/L	0.5	1.8	3.0	4.3	5.5	6.8	8
AMY	U/L	5	187.5	370.0	552.5	735.0	917.5	1100
AST	U/L	2	185.0	368.0	551.0	734.0	917.0	1100
CO2	mmol/L	5	11.7	18.3	25.0	31.7	38.3	45
LAC	mmol/L	0.2	1.8	3.5	5.1	6.7	8.4	10



OEM controls & calibrators

Lipid Profile Controls

The lipid profile control includes assayed method specific target values and ranges for 8 analytes covering the complete lipid profile.

Value	Level 1	Level 2
HDL-Cholesterol	32 mg/dL	68 mg/dL
LDL-Cholesterol	80 mg/dL	180 mg/dL
Total Cholesterol	130 mg/dL	300 mg/dL
Triglyceride	100 mg/dL	380 mg/dL
Apolipoprotein A	90 mg/dL	200 mg/dL
Apolipoprotein B	75 mg/dL	150 mg/dL
Apolipoprotein E	4 mg/dL	8 mg/dL
Lp (a)	12 mg/dL	20 mg/dL

- Very low turbidity
- Lyophilized or liquid enhanced stability
- 100% human serum
- Assayed target values provided for 8 parameters
- Stable to expiry date at 2–8°C
- Reconstituted stability of 7 days at 2–8°C or 4 weeks at -20°C

Lipids

A wide range of lipoprotein calibrators and standard controls are made upon customer request. All items are available in different specifications and concentration levels.

Code	Specificity	Source	Form
CD1130	Cholesterol TC / TG / HDL / LDL Ctrl.	human plasma	frozen / lyophil.
CD1112	HDL Concentrate, 1000 mg/dl	human plasma	frozen / lyophil.
CD1111	LDL Concentrate, 1000 mg/dl	human plasma	frozen / lyophil.
CD1113	VLDL Concentrate	human plasma	frozen / lyophil.
CT1120	BCC Concentrate, 2000 mg/dl	bovine plasma	frozen

The listed items are only a small selection of available materials.

1 GENERAL CHEMISTRY | LIPID PROFILE CONTROLS

OEM controls & calibrators

Lipid Control CD 1130

Item	Low level	High level
HDL-C	40 ~ 80 mg/dl	80 – 100 mg/dl
LDL-C	110 ~ 150 mg/dl	250 – 350 mg/dl
Total Cholesterol	180 ~ 250 mg/dl	400 – 500 mg/dl
Triglyceride	90 ~ 160 mg/dl	420 – 520 mg/dl

- 0.2ml - 10ml vials or 10L – 100L bulk
- frozen or lyophilized, 2 Years stability
- for manual / or automated platforms
- customized levels, aliquots, OEM labels, OEM boxes

2 TUMOR & CARDIAC



2 GENERAL CHEMISTRY | MULTI ANALYTE IMMUNOASSAY

OEM controls & calibrators

Multi Analyte Immunology, liquid / lyophilized

Analytes	units	Level 1	Level 2	Level 3
25-OH Vitamin D	ng/mL	15	40.00	100
Acetaminophen	ug/mL	10	30	120
ACTH	pg/mL	30	130	400
Aldosterone	pg/mL	125	350	650
Alpha Fetoprotein	ng/mL	30	120	240
Amikacin	ug/mL	4.5	12.5	25
Amitrpyline	ng/mL	40	90	120
Androstenedione	ng/mL	0.8	2.5	8.0
Angiotensin I	ng/L	20	100	200
Angiotensin II	ng/L	20	40	80
b-HCG	mIU/mL	5	25	300
BMG	mg/L	1	2.5	5
CA 125	U/mL	10	25	60
CA 15-3	U/mL	10.00	25.0	100
CA19-9	U/mL	10	50	350
Caffeine	ug/mL	1.50	8.0	13
Calcitonin	ng/L	10	30	100
Carbamezapine	ug/mL	3.00	8.0	13
CEA	ng/mL	3	14	40
CK-MB	ng/mL	2.5	10	40
Cortisol	ug/dL	5	20	40
C-Peptide	ng/mL	1	5	18
Cyclosporine	ng/mL	80	175	350
DHEA Sulfate	ug/dL	60	200	500
Digoxin	ng/mL	0.6	1.6	2.8
Disopyramide	ug/mL	1.0	3.5	6.0
Estradiol	pg/mL	100	400	800
Ethosuximide	ug/mL	30	75	120
Ferritin	ng/mL	40	100	300
Folate	ng/mL	4.0	7.0	15
Follicle Stimulating Hormone	mIU/mL	6.5	15	45
Gentamicin	ug/mL	2.5	5.0	9.0
Human Chorionic Gonadotropin	mIU/mL	5	25	300
Human Growth Hormone	mIU/mL	5	10	20



Analytes	units	Level 1	Level 2	Level 3
IgE	IU/mL	70	100	350
IGF-1	ng/mL	50	200	500
IGF-BP3	ug/mL	0.1	1.0	10
Insulin	uIU/mL	25	100	200
Leutinizing Hormone	mIU/mL	2	20	60
Lidocaine	ug/mL	1.5	4.0	7.0
Lithium	mmol/L	0.5	1.0	2.25
Myoglobin	ng/mL	30	100	300
NAPA	ug/mL	2.0	4.5	10
Phenobarbital	ug/mL	10	30	50
Phenytoin	ug/mL	7.0	15	25
Primidone	ug/mL	3.0	7.0	13
Progesterone	ng/mL	1.5	10	24
Prolactin	ng/mL	8	20	40
Prostate Specific Antigen, Free	ng/mL	0.4	2.3	18
Prostate Specific Antigen, Total	ng/mL	0.5	2.9	22
PTH	pg/mL	30	300	1000
Quinidine	ug/mL	7.0	15	25
Salicylate	mg/dL	3.0	14	40
SHBG	ug/mL	AF	AF	AF
T3, Free	pg/mL	2	10	20
T3, Total	ng/mL	0.8	1.8	3
T4, Free	ng/dL	0.55	1.83	3.85
T4, Total	ug/dL	3.5	8.5	15
TBG	ug/mL	AF	AF	AF
Testosterone	ng/dL	80	700	1350
Theophyline	ug/mL	5.0	15	30
Thyroid Stimulating Hormone	uIU/mL	0.5	5.00	22.5
Tobramycin	ug/mL	1.5	5.0	9.0
Troponin, I	ng/mL	1	15	50
Valproic Acid	ug/mL	30	75	125
Vancomycin	ug/mL	4	17	30
Vitamin B12	pg/mL	250	650	900

Troponin

Cardiac Marker Controls & Calibrators

Designed to monitor the precise cardiac levels.

3 - 5 mL Fill Size

- Liquid, human serum based
- 3 year shelf life at -20°C to -70°C
- 20 day open-vial stability at 2-8°C for most analytes

Product Name	Cat. No.
Troponin I Calibrator	
Level 1: 0 ng/ml Level 2: 10 ng/ml	CD1963
CKMB Calibrator	
Level 1: 0 ng/ml Level 2: 200 ng/ml	CD0350
Myoglobin Calibrator	
Level 1: 0 ng/ml Level 2: 1500 ng/ml	CD1270
BNP Calibrator	
Level 1: 0 pg/ml Level 2: 2500 pg/ml	CD0212
NSE Calibrator	
Level 1: 0 ng/ml Level 2: 125 ng/ml	CD1340
ACTH Calibrator	
Level 1: 0 pg/ml Level 2: 1000 pg/ml	CD0171

A variety of cardiac controls designed to monitor precision testing also at lower levels.



Multiple Cardiac Markers

Diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS). The cardiac troponins, in particular, have become the cardiac markers of choice for patients with ACS.

Cardiac Marker Control, level 1		
Product Name		Cat. No.
Troponin I:	0.5 ng/ml	CD3250
CKMB:	6 ng/ml	
Myoglobin:	60 ng/ml	
BNP:	90 pg/ml	
Cardiac Marker Control, level 2		
Product Name		Cat. No.
Troponin I:	35 ng/ml	CD3251
CKMB:	70 ng/ml	
Myoglobin:	800 ng/ml	
BNP:	3500 pg/ml	

- Lyophilized
- Packaging: 2ml per vial in dark-brown glass vials
- Stability: 2 years at -20°C

Cancer Marker

Multiple Tumor Markers

Diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS). The cardiac troponins, in particular, have become the cardiac markers of choice for patients with ACS.

CD3250	Tumor Marker Controls
	AFP
	bHCG
	BMG
	BNP
	CA 125
	CA 15-3
	CA 19-9
	CA 27.29
	CEA
	Ferritin
	HCG
	IGF-1
	PAP
	Prolactin
	PSA-Free
	PSA-total
	Tg
	TAP

- Lyophilized
- Packaging: 2ml per vial in dark-brown glass vials
- Stability: 2 years at -20°C
- 2ml fill



customized levels

Specialty Bone Immunoassay I, lyophilized

Priority	Analyte	Unit	Level 1	Level 2
1	Carbon Dioxide (CO2)	mmol/L	9	11
2	Alpha-L-Fucosidase (AFU)	U/L	5	11
3	Beta Hydroxybutyrate (̢-HB)	mmol/L	0.2	0.82
4	Fructosamine (Fruc, GSP)	umol/L	180	450
5	Adenosine Deaminase (ADA)	U/L	20	150
6	5'Nucleotidase (5'-NT)	U/L	15	40
7	Anti-CCP	IU/ml	15	50
8	Cystatin C	mg/L	0.45	1.5
9	CH50	U/mL	25	60

- Form: Lyophilized
- Packaging: 3ml per vial in dark-brown glass vials

2 TUMOR & CRADIAAC | SPECIALITY BONE & HYPERTENSION

customized levels

Specialty Immunoassay II Hypertension, lyophilized

Name	Focused analyzer	Unit	Level 1	Level 2
ACTH	Roche Elecsys	pg/ml	10-50	350-500
TRAb	Roche Elecsys	IU/L	0-2	4-6
Anti-TG	Roche Elecsys	IU/ml	40-100	300-500
Anti-TPO	Roche Elecsys	IU/ml	30-80	300-500
TG	Roche Elecsys	ng/ml	0-10	100-160
Renin	Roche Elecsys	pg/ml	10-30	60-100
Angiotensin I	Roche Elecsys	ng/L	10-30	150-250
Angiotensin II	Roche Elecsys	ng/L	10-30	60-100
Aldosterone	Roche Elecsys	pg/ml	40-10	300-500
Calcitonin	Roche Elecsys	ng/L	5-15	70-130
ProGRP	Roche Elecsys	pg/mL	20-60	1000-2000
Procalcitonin	Roche Elecsys	ng/mL	0.4-0.8	10-13

- 3ml per vial in dark-brown glass vials
- Stability:
 - open vial: > 5 days at 2-8°C
 - closed vial: 3 years at 2-8°C
- Discrepancy between vial: < 0.5%

3 INFECTIOUS AND DISEASE STATE



MMR | TORCH | STD

Infectious Disease

Positive Control with multiple industry standard systems. Both negative/positive and multianalyte controls.

Specificity	Specificity
BORRELIA IgM	MUMPS IgG
BORRELIA IgG	MYCOPLASMA IgG
CHAGAS	MYCOPLASMA IgM
CMV IgG	PARVOVIRUS B 19 IgM
CMV IgG Avidity	PARVOVIRUS B19 IgG
CMV IgM	RUBELLA IgG
EA IgG	RUBELLA IgM
EBNA IgG	SYPHILIS
EBV	TOXO IgG
EBV IgM	TOXO IgG Avidity
HAV IgM	TOXO IgM
HIV Ag / Ab Combo	TREPONEMA
HTLV-I/HTLV-II	VCA IgG
MEASLES IgG	Zika IgM

- Liquid ready-to-use
- Stable to expiry when stored at 2–8°C
- Qualitative or quantitative results

Syphilis Control

Syphilis control is an external control for use with in vitro serology assays that detect IgG antibodies to *Treponema pallidum* (Syphilis).

10 × 4 mL Syphilis Positive Control DM1802-C

- Ready-to-use, manufactured human plasma or serum; closely resembles an actual patient sample
- Able to be combined with other controls in a custom combination
- Nonreactive for HBsAg and antibodies to HIV ½, HTLV, and HCV

Code	Specificity	Source	Form
DM1802-C	Syphilis IgG / IgM	human serum	liquid / lyophilized



Manufactured QC Panels (examples)

Code	Specificity		Form
DM1102-P	Borrelia IgM	5 levels	lyophil. / liquid
DV1031-P	CMV IgM	5 levels	lyophil. / liquid
DV1053-P	EBNA-G	4 levels	lyophil. / liquid
DH1102-P	HAV IgM	4 levels	lyophil. / liquid
DH1257-P	HBc IgM	5 levels	lyophil. / liquid
DH1200-P	HBsAg	5 levels	lyophil. / liquid
DV1082-P	HSV 1/2 IgM	5 levels	lyophil. / liquid
DM1902-P	TOXO IgM	5 levels	lyophil. / liquid
DM1802-P	Treponema	5 levels	lyophil. / liquid
DV1211-P	VZV IgM	5 levels	lyophil. / liquid
DA1708-P	RF / CCP	5 levels	lyophil. / liquid
DM1901-P	Toxo IgG	5 levels	lyophil. / liquid
DM1703-P	Rubella IgM	5 levels	lyophil. / liquid

- Single / multi analyte formulated for manual & automated platforms
- Liquid, ready to use or lyophilized for long term storage
- 0.2ml – 10ml vials, liquid, frozen or lyophilized, labeled

	Level 1 – Control	Level 2 – Control	Level 3 – Calibration
ASO	500-600 IU/mL	500-600 IU/mL	500-600 IU/mL
RF	150-200 IU/mL	150-200 IU/mL	700-800 IU/mL
CRP	20-30 mg/L	80-100 mg/L	360-400 mg/L

The full list of QC Panels is available at www.trinabio.com

Hep A/B/C

Hepatitis Control

HepCon I	HepCon II	HepCon III
Anti-HAV	Anti-HAV	Anti-CMV
HBc-IgM	Anti-HBs	Anti-HBc
HAV-IgM	Anti-HBe	Anti-HCV
	Anti-HBc	Anti-HIV-1
		Anti-HTLV-I
		HBsAg

- True human serum based
- 3 year shelf life at 2–8°C
- 60 day open-vial stability at 2–8°C

All Virus Negative Control

An non-reactive quality control, made from human serum. Non-reactive for tested analytes for Hepatitis, Retrovirus, Syphilis and antibodies to CMV

All Virus negative Control		
Anti-CMV	HBsAg	HAV-IgM
Anti-HAV	Anti-HCV	HIV-1 Ag
Anti-HBc	Anti-HDV	Treponema pallidum
Anti-HBe	Anti-HIV-1	[Syphilis] IgG
Anti-HBs	Anti-HIV-2	[Syphilis] IgM
HBc-IgM	Anti-HTLV-I	
HBeAg	Anti-HTLV-II	



TORCH IgG Control

Two level, liquid control used to monitor the most widely used serology test methods. A positive and a negative control allow you to check the precision of your test system.

Liquid or lyophilized , human serum based

- | | |
|---|--|
| <ul style="list-style-type: none">• Toxoplasma gondii IgG• Rubella Virus IgG• Cytomegalovirus (CMV) IgG• Herpes Simplex Virus Type 1 (HSV-1) IgG• Herpes Simplex Virus Type 2 (HSV-2) IgG | <ul style="list-style-type: none">• Epstein-Barr Virus (VCA) IgG• Varicella Zoster Virus (VZV) IgG• Helicobacter pylori IgG• Treponema pallidum (Syphilis) IgG• Syphilis RPR |
|---|--|

- Open vial: 90 days at 2–8°C
- Closed vial: 3 years at 2–8°C

TORCH IgM Control

Two level, unassayed liquid control used to monitor the precision of immunoassay methods to detect IgM antibodies to TORCH panel analytes.

Analytes

- Toxoplasma gondii IgM
- Rubella Virus IgM
- Cytomegalovirus (CMV) IgM
- Herpes Simplex Virus Type 1 (HSV-1) IgM
- Herpes Simplex Virus Type 2 (HSV-2) IgM

- Open vial: 90 days at 2–8°C
- Closed vial: 3 years at 2–8°C

flaviviruses

Zika / Dengue Control

10 × 4 mL Zika Positive Control DV1213-C

- Ready-to-use, manufactured human plasma or serum; closely resembles an actual patient sample
- Able to be combined with other controls in a custom combination
- Nonreactive for HBsAg and antibodies to HIV 1/2, HTLV, and HCV

Code	Specificity	Source	Form
DV1213-C	Zika IgG / IgM / NS1 positive	human serum	liquid / lyophilized

Dengue: DM1054-C , Zika IgM: DV1214-C

4 SPECIALITY CONTROLS



immunology analytes

Immunology Control

Available as liquid or lyophilized. Levels and analytes can be adapted for customer's requirements.

Analyte	Units	Level 1	Level 2	Level 3
Albumin	mg/dL	2.4	4.2	5.5
Alpha-1-Acid Glycoprotein	mg/dL	40	80	110
Alpha-1-Antitrypsin	mg/dL	75	127	172
Alpha-2-Macroglobulin	mg/dL	100	290	452
Anti-Cyclic Citrullinated Pept.		< 1	20	50
Antistreptolysin O	IU/mL	90	160	330
Apolipoprotein A-1	mg/dL	80	180	300
Apolipoprotein B	mg/dL	40	100	175
Beta-2-Microglobulin	ng/mL	0.075	0.200	0.300
C1 Inhibitor	mg/dL	15	35	60
Ceruloplasmin	mg/dL	16	34	50
Complement C3	mg/dL	80	180	280
Complement C4	mg/dL	15	35	55
CRP	mg/dL	0.5	2.5	5
Ferritin	ng/mL	27.5	134	226
Haptoglobin	mg/dL	65	150	250
IgA	mg/dL	110	250	375
IgE	IU/mL	50	100	180
IgG	mg/dL	700	1400	2000
IgM	mg/dL	55	135	215
Kappa Light Chain	mg/dL	150	330	500
Lambda Light Chain	mg/dL	80	180	250
Lipoprotein (a)	mg/dL	5	15	22
Prealbumin	mg/dL	12	24	35
Protein (Total)	g/dL	3.8	7	9.5
Rheumatoid Factor	IU/mL	< 20	35	80
Transferrin	mg/dL	150	300	400



acute markers

ASO/RF/CRP control

Analyte	Unit	Level 1	Level 2	Calibrator
ASO	IU/mL	250	450	550
RF	IU/mL	175	350	750
CRP	mg/L	25	90	380

- True human serum based
- 3 year shelf life at 2–8°C
- 60 day open-vial stability at 2–8°C

autoimmune

Autoimmune Control I

Analyte	Unit	Range
ANA	AU/mL	100±30
dsDNA IgG	AU/mL	60±20
SS-A IgG	AU/mL	60±20
SS-B IgG	AU/mL	60±20
Sm IgG	AU/mL	60±20
RNP70 IgG	AU/mL	60±20
Jo-1 IgG	AU/mL	60±20
Scl-70 IgG	AU/mL	60±20
RF IgG	AU/mL	100±30
RF IgM	IU/mL	100±30
RF	AU/mL	100±30
Anti-CCP	U/mL	50±15
RA33 IgG	AU/mL	60±20

Autoimmun Control II

Analyte	Unit	Range
Cardiolipin IgG	GPLU/mL	50±15
Cardiolipin IgM	MPLU/mL	50±15
Anti-Cardiolipin	AU/mL	60±20
β2-Glycoprotein I IgG	AU/mL	60±20
Anti-β2-Glycoprotein I	AU/mL	60±20
AMA-M2	AU/mL	60±20
SMA IgG	COI	3±1
MPO IgG	AU/mL	60±20
Proteinase 3 IgG	AU/mL	60±20
GBM IgG	AU/mL	60±20



Urine Chemistry / Real Time Uricheck

Analyte	Units	Level 1 Target	Level 1 Range	Level 2 Target	Level 2 Range
Amylase	U/L	147	103-191	282	197-367
Calcium	mg/dL	7.2	5.0-9.4	15.6	11.1-20.5
Chloride	mEq/L	108	76-140	273	191-355
Creatinine	mg/dL	76	53-98	174	122-226
Glucose	mg/dL	28	20-36	276	193-358
Magnesium	mg/dL	4	2.8-5.2	8.6	6.0-11.2
Potassium	mEq/L	26	18-33	91	64-118
Phosphorus	mg/dL	26	18-34	51	36-66
Sodium	mEq/L	90	62-118	190	133-247
Total Protein	mg/dL	33	23-43	96	67-125
Micro Albumin	mg/dL	1.2	0.8-1.8	10	7-13
Urea Nitrogen	mg/dL	427	299-555	673	484-862
Uric Acid	mg/dL	6	4.3-7.9	14.6	10.2-19
Osmolality	mOsm/kg	367	294-440	800	640-960
pH	Units	5.9	5.3-6.5	5.9	5.3-6.5
Specific Gravity	g/mL	1.008	1.000-1.010	1.017	1.008-1.018
hCG	+/-	negative	negative	positive	positive

Urine Analysis

Analyte	Level 1	Level 2
Bilirubin	Negative	Strong Positive
Blood	Negative	Positive
Creatinine	50-100 mg/dL	→ 250 mg/dL
Glucose	Normal	→ 250 mg/dL
Ketones	Negative	Positive
Leukocytes	Negative	Strong Positive
Microalbumin	10 - 30 mg/L	→ 80 mg/L
Nitrite	Negative	Positive
pH	5.0 - 6.0	7.0 - 8.5
Protein	Negative	→100
Specific Gravity	1.025	1.010
Urobilinogen	0.6 EU/dL	6 EU/dL

- 2-Level Urinalysis Control (possessing 24 month closed vial stability)
- 30 days open vial stability 2-8°C

Vitamin D Control

- Vitamin D sufficiency indicators: 25(OH) Vitamin D₂ and 25(OH) Vitamin D₃
- Custom-assigned for multiple platforms
- Lyophilized or liquid, serum-based matrix
- Reconstituted stability up to 14 days at 2–8°C
- Reconstituted stability up to 60 days at -15°C

Code	Product Name	Matrix Levels
Vitamin D Control		
DM2210	Human Matrix Serum	Level 1: 2 x 2 mL
		Level 2: 2 x 2 mL
		Level 3: 2 x 2 mL

Three levels ranging in the clinically relevant concentrations.

Analyte	Units	Reference Ranges	Typical Range Level 1	Typical Range Level 2	Typical Range Level 3
25(OH) Vitamin D	ng/mL	40 – 100	8 – 12	25 – 35	60 – 80
25(OH) Vitamin D	nmol/L	100 – 250	20 – 29	62 – 90	150 – 200

5 COAGULATION



AT APTT

Coagulation Control, lyophilized

Analyte	Units	Level 1	Level 2	Level 3
Prothrombin Time	Seconds	10	20	30
Activ. Part. Thromboplastin Time	Seconds	24	45	60
Antithrombin III	%	110	60	40
Fibrinogen	mg/dL	300	125	80
Thrombin Time	Seconds	20	30	40

- Human based
- 3 year shelf life at 2–8°C
- 48 hour open-vial stability at 2–25°C

A human plasma control for routine coagulation tests.



AT APTT

Coagulation Control Factor specific, lyophilized

Analyte	Units	Level 1	Level 2
APTT	Seconds	35	48
PT	%	120	40
Fbg	mg/dL	315	200
ATIII	%	100	80
Factor II	%	100	80
Factor X	%	100	80

Coagulation PT Specimen

Analyte	Units	Low Fibrinogen	High Fibrinogen	Normal	Elevated	Highly Elevated
PT	Seconds	17.38	10.83	10.77	18.58	25.24
APTT	Seconds	47.93	24.02	24.72	34.88	41.92
Fibrinogen	mg/dL	85.67	361.33	248.02	234.3	236.08

6 DIABETES MONITORING



diabetes control

HbA1c Liquid Control / Verification

HbA1c Controls & Calibrators are intended for use as quality control material to monitor the performance and precision of diabetes (HbA1c %) Kits.

Code	Specificity	Source	Form
A0809-1	Hemoglobin A1c, 10.0%	human erythrocyte	frozen
A0809-2	Hemoglobin A1c, 15.0 - 16.0%	human erythrocyte	frozen
A0809-3	Hemoglobin A1c, 3.0 - 4.0%	human erythrocyte	frozen
A0809-4	Hemoglobin A1c, 5.0 - 6.0%	human erythrocyte	frozen
A0809-5	Hemoglobin A1c, 7.0 - 8.0%	human erythrocyte	frozen
A0810	Hemoglobin base, free of HbA1c	human erythrocyte	frozen

HbA1c Lyophilized Control

HbA1c Controls & Calibrators are intended for use as quality control material to monitor the performance and precision of diabetes (HbA1c %) Kits.

Method Instrument / Kit	Unit	Level 1 target values	Level 2 target values	Level 3 target values	Level 4 target values
Cobas Integra 400	%A1c	5.6	8.7	11.0	13.4
Bayer A1c now+	%A1c	5.2	7.7	10.4	12.5
Tosoh 2.2 HPLC	%A1c	5.7	8.8	11.8	14.5
Tosoh G8 HPLC	%A1c	5.3	8.3	11.1	14.3
Variant II	%A1c	5.5	8.2	11.0	13.5
Primus ultra2	%A1c	5.3	8.1	11.0	13.9
DCA 2000	%A1c	5.2	8.0	10.8	14

- 0.2ml-10ml vials or 10L -100L bulk
- frozen or lyophilized
- > 6 month 2-8°C stability
- for manual / or automated platforms
- customized levels, aliquots, OEM labels, OEM boxes



acute markers

Hematology Control with CRP

	Level 1	Level 2
CRP	40mg/L	250-500mg/L

- Tested values: Hb, Hk, Ec, Lc, Tc
- Liquid
- Stabilized

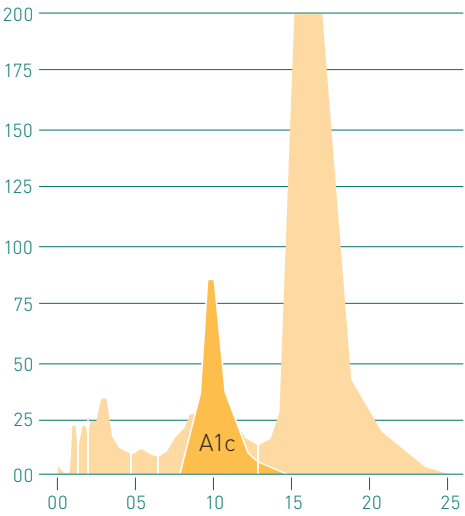
diabetes control

RBC Basematrix

Lysed Red Blood Cells for Immunosuppressant Control

Analyte	Value
Hemoglobin [%]	13.01
pH	7.03

- Source: Human red blood cells from U.S. plasma collection centers
- Appearance: Liquid
- Additives: Stabilized
- Storage: -20°C or colder



7 PROFICIENCY TESTING



lab quality

Proficiency Testing

IVD Laboratory medicine is adapting at a rapid pace. Our range of proficiency testing is constantly evolving to keep up with the changing environment.

We can manufacture your quality control to your needs and specifications.

- 0.5–5ml customized fill
- Liquid ready-to-use
- 100% human serum based



Available proficiency testing	
Anca	HsCRP/linearity
Anticardiolipin	IgD
Serum Alcohol	Immunoglobulins
Allergy	Immunoproteins
Ammonia	Immuno – seroplasma
ANA +/-	Lipids
Anti-DNA +	Lyme +/-
Anti-SM/RNP +	Microalbumin
Anti-Thyroglobulin +/-	Mono +/-
ASO +/-	Myco +/-
Blood Lead	Neonatal Bilirubin
Body Fluid	PANCA
C3/C4	prealbumin
Cardiolipin	RF +/-
Coagulation	Rubella +/-
CRP	SSA
CRP linearity	SSB
CSF	Serum hCG +/-
DNA	Smith RNP
GBM	Smooth muscle ASA
Fecal Occult +/-	Strep A +/-
Fructosamine	Syphilis +/-
Gram Stains	TORCH
H Pylori +/-	Tumor Marker
Hemoglobin A1C Nor/Abn	Thyromicro
Hemoglobin/Glucose	UIBC
Hepatitis Marker	Urine Chemistry
HIV +/-	Urine Drug Screen
hsCRP	Urine hCG +/-

TERMS & CONDITIONS

Ordering

Orders can be placed by fax or mail. Telephone orders must be reconfirmed in written form. Each order must contain an order number, product description and order quantity, bill to and ship to and any special shipping instructions. Special conditions and/or documentation should be noted when placing an order.

Delivery

Shipments will be determined based on the best method to ensure stability and safety of the product, minimize freight costs and allow efficient traceability. All shipments are ex works TRINA, unless quoted otherwise. TRINA will endeavour to comply with any delivery date or period quoted, but we shall not be liable for any damage by reason of any failure to do so.

Pricing

All prices are based on material volume. Prices shall only be quoted after sample acceptance.

Payment

Unless specifically quoted amounts invoiced are net and due for payment 30 days from the date of the invoice. Ordered material remains TRINA's property until full payment has been received. All accounts not paid within one month will be subject to a surcharge of 5% plus a further 1.5% for each further month's delay thereafter. Without prejudice to any other available remedy we reserve the right to withhold further deliveries of goods where invoices are not paid by the due date for payment.

Use of products

Our products are intended for in-vitro applications only. Each product offered by TRINA is intended for use by qualified professionals who will safely handle and dispose of the products they receive.

Right of Restitution

Restitutions can only be accepted once TRINA has given it's consent. Material sold is raw material and any evaluations have to be executed prior to removal from the original container.



Liability

We can only be responsible to supply the kind and quantity of goods ordered. It is regretted that we cannot be liable whatsoever for loss, damage, costs, direct or expenses arising from any item supplied by us. All goods supplied by TRINA should be examined and tested on receipt and any precaution respecting storage or danger to persons should be taken after receipt. We accept no responsibility for the consequences of inadequate storage precautions or injury to persons resulting from careless use of the item. The entire risk as to the performance of these products is assumed by the buyer.

TRINA shall not be liable for indirect, special or consequential damages of any kind resulting from use of the products.

We can only accept responsibility for goods damaged in transit if the damage is reported in writing to ourselves and to the carriers within three days of delivery. Claims for damaged materials, sent by either courier or postal services can only be accepted if notification to TRINA is made in writing within three days. Post market surveillance and vigilance is the receiver's duty only.

Patent Disclaimer

The TRINA does not warrant that the use of the products delivered hereunder will not infringe the claims of any patents covering the product itself or the use thereof in combination with other products or in the operation of any process.

Jurisdiction

The construction validity and performance of this contract shall be governed by the Laws of Switzerland, State of Zurich, Exclusive place of jurisdiction is Uster.

