



# PRODUCT INFORMATION

IA3111 / IA3112

2028EC

The reconstituted stability for Immunoassay Premium Plus Level 3 lot 2028EC for **Free PSA and Total PSA is 2 days when stored at +2°C to +8°C.**

Free PSA and Total PSA are stable for 28 days when frozen once and stored at -20°C.

CCS6934

## IMMUNOASSAY PREMIUM PLUS - LEVEL 3 (IA PREMIUM PLUS 3)

<b>CAT. NO.</b> IA3111	<b>GTIN:</b> 05055273207279	<b>SIZE:</b> 12 x 5 ml
<b>CAT. NO.</b> IA3112	<b>GTIN:</b> 05055273207286	<b>SIZE:</b> 4 x 5 ml
<b>LOT NO.</b> 2028EC	<b>EXPIRY:</b> 2023-11-28	

### INTENDED USE

This product is intended for *in vitro* diagnostic use, as assayed quality control material to monitor the accuracy and reproducibility of analytes listed in the package insert.

**This device is for prescription use only.**

### SAFETY PRECAUTIONS AND WARNINGS

For *in vitro* diagnostic use only. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.

However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

The Abbott Architect CA19-9 assay utilises an antibody/antigen system based on the 1116-NA-19-9 antibody. There are reports that the formulation employed with this system may return elevated concentrations, when compared to other methods for samples expressing high levels of 1116-NA-19-9 reactive determinants.

Health and Safety Data Sheets are available on request.

### STORAGE AND STABILITY

**OPENED:** Store refrigerated (+2°C to +8°C). Reconstituted serum is stable for 7 days at +2°C to +8°C, if kept capped in original container and free from contamination, or 4 weeks frozen once at -20°C. Free PSA and Total PSA are stable for 2 days at +2°C to +8°C. Peptide is stable for 1 day at +2°C to +8°C. Thyroglobulin should be tested within 4 hours of reconstitution when stored at +2°C to +8°C, or within 2 weeks when stored at -20°C. ACTH should be tested immediately after the 30-minute reconstitution period. No frozen stability claim is made for ACTH, Aldosterone and C-Peptide. Only the required amount of product should be removed. After use, any residual product should NOT BE RETURNED to the original vial.

**UNOPENED:** Store refrigerated (+2°C to +8°C). Stable to expiration date printed on individual vials.

Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components. If bacterial contamination is suspected, the vial should be discarded and a fresh vial reconstituted.

### PREPARATION

Immunoassay Premium Plus is supplied lyophilised.

- Carefully reconstitute each vial of lyophilised serum with exactly 5 ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.
- Refer to the Control section of the individual analyser application.
- Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

### MATERIALS PROVIDED

Immunoassay Premium Plus - Level 3: 12 x 5 ml Tri-Level: 4 x 5 ml

### MATERIAL REQUIRED BUT NOT PROVIDED

Volumetric pipette

### VALUE ASSIGNMENT

Each batch of Immunoassay Premium Plus is submitted to a number of external laboratories. Values are assigned from a consensus of results obtained by these laboratories, using a unique statistical analysis. Average values should normally fall within the listed ranges for analytes in the instruments specified in this product insert. However, variations may be caused by instrument reagents and laboratory technique. Therefore, the range produced herein should only be considered as a reference and it is recommended that each laboratory establish its own mean and acceptable ranges. Aldosterone is present in control levels 2 and level 3 only. Parathyroid Hormone (PTH) is present in the control, but no claim is made for the expected value or stability of this analyte.

If a method is unavailable, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email [Technical.Services@randox.com](mailto:Technical.Services@randox.com).

EC	REP
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## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
17-OH-Progesterone	nmol/l	53.8	40.4	67.3	DIAsource ELISA
	ng/ml	17.8	13.4	22.2	
25-OH Vitamin D	nmol/l	139	104	174	Siemens Centaur XP/XPT/Classic
	nmol/l	78.9	59.2	98.6	Roche Vitamin D Total
	nmol/l	92.0	69.0	115	Abbott Architect (3L52)
	nmol/l	112	84.0	140	Vitros ECi
	nmol/l	92.0	69.0	115	BioMerieux Vidas
	nmol/l	97.8	73.4	122	Beckman Dxl 600/800
	nmol/l	92.6	69.5	116	Abbott Architect (5P02)/ Alinity (8P45)
	nmol/l	104	78.0	130	Roche Vitamin D Total II
	nmol/l	97.6	73.2	122	Abbott Alinity i
	nmol/l	104	78.0	130	Roche Vitamin D Total II e801
ACTH	pmol/l	29.8	22.4	37.3	Siemens Immulite 2000/2500
	pg/ml	135	102	168	
	pmol/l	21.5	16.1	26.9	Roche Cobas 4000/E411
	pg/ml	97.7	73.2	122	
	pmol/l	21.3	16.0	26.6	Roche Cobas e601/602
	pg/ml	96.8	72.7	121	
Aldosterone	pmol/l	168	126	210	Diasorin Liaison XL
	pg/ml	60.6	45.5	75.7	
Alphafoetoprotein	KIU/l = IU/ml	192	154	230	BioMerieux Vidas
	ng/ml	232	186	278	
	KIU/l = IU/ml	190	152	228	Vitros ECi
	ng/ml	198	158	238	
	KIU/l = IU/ml	203	160	246	Siemens Centaur XP/XPT/Classic
	ng/ml	246	194	298	
	KIU/l = IU/ml	163	130	196	Siemens Immulite 2000/2500
	ng/ml	197	157	237	
	KIU/l = IU/ml	170	136	204	Abbott Architect
	ng/ml	206	165	247	
	KIU/l = IU/ml	171	137	205	Beckman Dxl800
	ng/ml	207	166	248	
	KIU/l = IU/ml	196	157	235	Roche Cobas e601/602
	ng/ml	237	190	284	
	KIU/l = IU/ml	205	164	246	Roche Cobas 4000/E411
	ng/ml	248	198	298	
KIU/l = IU/ml	172	138	206	Abbott Alinity i	
ng/ml	208	167	249		
KIU/l = IU/ml	190	152	228	Roche Cobas e801	
ng/ml	230	184	276		

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Amikacin	µmol/l	24.1	19.3	28.9	Gravimetric
	µg/ml	14.1	11.3	16.9	
Androstenedione	nmol/l	30.7	23.0	38.4	Siemens Immulite 2000
	ng/ml	8.81	6.60	11.0	
Beta-2-microglobulin	µg/ml = mg/l	6.42	5.14	7.70	Abbott Architect
	µg/ml = mg/l	6.35	5.08	7.62	Roche Cobas 6000/8000
C-Peptide	nmol/l	3.540	2.660	4.430	Siemens Immulite 2000/2500
	ng/ml	10.7	8.03	13.4	
	nmol/l	3.560	2.670	4.450	Roche Cobas e601/602
	ng/ml	10.7	8.06	13.3	
C-Peptide	nmol/l	3.390	2.540	4.240	Roche Cobas e801
	ng/ml	10.2	7.67	12.7	
CA 15-3	U/ml	80.2	55.3	105	Siemens Centaur XP/XPT/Classic
	U/ml	91.1	72.9	109	Abbott Architect
	U/ml	34.3	27.4	41.2	Beckman Access
	U/ml	32.6	26.1	39.1	Beckman Dxl800
	U/ml	77.2	61.8	92.6	Roche Cobas e601/602
	U/ml	76.8	61.4	92.2	Roche Cobas 4000/E411
	U/ml	75.0	60.0	90.0	Roche Cobas e801
	U/ml	86.9	69.5	104	Abbott Alinity i
CA 19-9	U/ml	169	117	221	Siemens Centaur XP/XPT/Classic
	U/ml	950	760	1140	Siemens Immulite 2000/2500
	U/ml	233	186	280	Vitros Eci
	U/ml	1135	908	1362	Beckman Dxl800
	U/ml	199	159	239	Abbott Architect XR/XR2/XRL
	U/ml	167	134	200	Roche Cobas e601/602
	U/ml	164	131	197	Roche Cobas 4000/E411
	U/ml	164	131	197	Roche Cobas e801
	U/ml	204	163	245	Abbott Alinity XR/XR2/XRL
CA125	U/ml	144	115	173	BioMerieux Vidas
	U/ml	72.1	57.7	86.5	Siemens Immulite 2000/2500
	U/ml	107	85.6	128	Vitros Eci
	U/ml	159	127	191	Abbott Architect
	U/ml	99.0	68.3	130	Siemens Centaur XP/XPT/Classic CA125 II kit
	U/ml	47.9	38.3	57.5	Beckman Access
	U/ml	50.8	40.6	61.0	Beckman Dxl800
	U/ml	175	140	210	Roche Cobas 4000/E411
	U/ml	177	142	212	Roche Cobas e601/602
	U/ml	160	128	192	Roche Cobas e801
	U/ml	168	134	202	Abbott Alinity i
Carbamazepine	µmol/l	67.1	41.6	92.6	Siemens Centaur XP/XPT/Classic
	µg/ml	15.9	9.86	21.9	
	µmol/l	64.4	51.5	77.3	Abbott Architect
	µg/ml	15.2	12.2	18.2	
	µmol/l	63.1	50.5	75.7	Roche Cobas 6000/8000
µg/ml	14.9	11.9	17.9		

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Carbamazepine	µmol/l	72.2	57.8	86.6	Gravimetric
	µg/ml	17.1	13.7	20.5	
Carcinoembryonic Antigen (CEA)	ng/ml = µg/l	56.0	44.8	67.2	BioMerieux Vidas
	ng/ml = µg/l	63.5	50.8	76.2	Vitros ECi
	ng/ml = µg/l	54.7	43.8	65.6	Beckman Access
	ng/ml = µg/l	57.8	39.9	75.7	Siemens Centaur XP/XPT/Classic
	ng/ml = µg/l	74.4	59.5	89.3	Siemens Immulite 2000/2500
	ng/ml = µg/l	68.4	54.7	82.1	Abbott Architect
	ng/ml = µg/l	53.3	42.6	64.0	Beckman DxI800
	ng/ml = µg/l	47.0	37.6	56.4	Roche Cobas e601/602
	ng/ml = µg/l	48.5	38.8	58.2	Roche Cobas 4000/E411
	ng/ml = µg/l	54.0	43.2	64.8	Siemens Atellica IM
	ng/ml = µg/l	47.9	38.3	57.5	Roche Cobas e801
ng/ml = µg/l	68.3	54.6	82.0	Abbott Alinity i	
Cortisol	nmol/l	999	749	1249	Siemens Immulite 1000
	µg/dl	36.0	27.0	45.0	
	nmol/l	1057	729	1385	Siemens Centaur XP/XPT/Classic
	µg/dl	38.1	26.3	49.9	
	nmol/l	857	643	1071	Siemens Immulite 2000/2500
	µg/dl	30.9	23.1	38.7	
	nmol/l	867	650	1084	Vitros ECi
	µg/dl	31.2	23.4	39.0	
	nmol/l	824	618	1030	Abbott Architect
	µg/dl	29.7	22.2	37.2	
	nmol/l	939	704	1174	Beckman DxI800
	µg/dl	33.8	25.3	42.3	
	nmol/l	1027	770	1284	Roche Cobas e601/602
	µg/dl	37.0	27.7	46.3	
	nmol/l	1040	780	1300	Roche Cobas 4000/E411
	µg/dl	37.4	28.1	46.7	
	nmol/l	970	728	1213	Roche Cobas 4000/e411 Gen II
µg/dl	34.9	26.2	43.6		
nmol/l	882	662	1103	Roche Cobas e601/602 Gen II	
µg/dl	31.8	23.8	39.8		
nmol/l	901	676	1126	Roche Cobas e801	
µg/dl	32.4	24.3	40.5		
nmol/l	827	620	1034	Abbott Alinity i	
µg/dl	29.8	22.3	37.3		
nmol/l	882	662	1103	Roche Cobas e801 Gen II	
µg/dl	31.8	23.8	39.7		
DHEA-S	µmol/l	17.7	14.2	21.2	Siemens Immulite 2000/2500
	µmol/l	20.4	16.3	24.5	Abbott Architect
	µmol/l	16.4	13.1	19.7	Beckman DxI800
	µmol/l	15.4	9.24	21.6	Siemens Centaur XP/XPT/Classic
	µmol/l	24.6	19.7	29.5	Roche Cobas 4000/E411
	µmol/l	25.3	20.2	30.4	Roche Cobas e601/602

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
DHEA-S	µmol/l	24.7	19.8	29.6	Roche Cobas e801
Digoxin	nmol/l	4.00	3.20	4.80	Abbott Architect
	ng/ml	3.12	2.50	3.74	
	nmol/l	4.36	3.49	5.23	Beckman Dxl800
	ng/ml	3.41	2.73	4.09	
	nmol/l	4.70	3.76	5.64	Roche Cobas e801
	ng/ml	3.67	2.94	4.40	
Ethosuximide	µmol/l	493	394	592	Gravimetric
	µg/ml	69.9	55.9	83.9	
Ferritin	ng/ml = µg/l	282	226	338	BioMerieux Vidas
	ng/ml = µg/l	359	287	431	Roche Elecsys/Cobas e411
	ng/ml = µg/l	254	203	305	Beckman Access
	ng/ml = µg/l	217	174	260	Vitros ECI
	ng/ml = µg/l	310	242	378	Siemens Centaur XP/XPT/Classic
	ng/ml = µg/l	295	236	354	Siemens Immulite 2000/2500
	ng/ml = µg/l	393	314	472	Abbott Architect
	ng/ml = µg/l	350	280	420	Roche Modular E170 / Roche Cobas e601/602
	ng/ml = µg/l	244	195	293	Beckman Dxl800
	ng/ml = µg/l	279	218	340	Siemens Centaur CP
	ng/ml = µg/l	390	312	468	Abbott Alinity i
Folate	nmol/l	23.0	17.5	28.5	Beckman Access
	ng/ml	10.1	7.72	12.5	
	nmol/l	16.6	12.6	20.6	Siemens Immulite 2000
	ng/ml	7.32	5.56	9.08	
	nmol/l	13.6	10.3	16.9	Vitros ECI
	ng/ml	6.00	4.54	7.46	
	nmol/l	18.6	14.1	23.1	Abbott Architect
	ng/ml	8.20	6.22	10.2	
	nmol/l	35.7	21.4	50.0	Siemens Centaur XP/XPT/Classic (enhanced kit)
	ng/ml	15.7	9.42	22.0	
	nmol/l	24.1	18.3	29.9	Roche Folate III - 07559992
	ng/ml	10.6	8.07	13.1	
	nmol/l	20.7	15.7	25.7	Abbott Alinity i
	ng/ml	9.13	6.92	11.3	
	nmol/l	23.4	17.8	29.0	Roche Cobas e801
	ng/ml	10.3	7.85	12.8	
Free T3	nmol/l	22.9	17.4	28.4	Beckman Dxl 600 / 800 - A98032
	ng/ml	10.1	7.67	12.5	
	pmol/l	27.6	20.7	34.5	Roche Elecsys
	ng/dl	1.79	1.35	2.23	
Free T3	pg/ml	18.0	13.5	22.5	
	pmol/l	18.6	14.0	23.3	Beckman Access
	ng/dl	1.21	0.910	1.51	
	pg/ml	12.1	9.11	15.1	

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Free T3	pmol/l	21.1	12.7	29.5	Siemens Centaur XP/XPT/Classic
	ng/dl	1.37	0.822	1.92	
	pg/ml	13.7	8.22	19.2	
	pmol/l	15.0	11.3	18.8	Siemens Immulite 2000/2500
	ng/dl	0.975	0.735	1.22	
	pg/ml	9.77	7.36	12.2	
	pmol/l	15.9	11.9	19.9	Beckman Dxl800
	ng/dl	1.03	0.774	1.29	
	pg/ml	10.4	7.75	13.1	
	pmol/l	27.4	20.6	34.3	Roche Cobas 4000/E411
	ng/dl	1.78	1.34	2.22	
	pg/ml	17.8	13.4	22.2	
	pmol/l	27.9	20.9	34.9	Roche Cobas e601/602
	ng/dl	1.81	1.36	2.26	
	pg/ml	18.2	13.6	22.8	
	pmol/l	22.2	16.7	27.8	Siemens Atellica IM
	ng/dl	1.44	1.09	1.79	
	pg/ml	14.5	10.9	18.1	
	pmol/l	27.4	20.6	34.3	Roche Cobas e801
	ng/dl	1.78	1.34	2.22	
	pg/ml	17.8	13.4	22.2	
pmol/l	22.6	17.0	28.3	Abbott Alinity, 6 point cal	
ng/dl	1.47	1.11	1.83		
pg/ml	14.7	11.1	18.3		
pmol/l	22.3	16.7	27.9	Abbott Architect, 2 point calibration	
ng/dl	1.45	1.09	1.81		
pg/ml	14.5	10.9	18.2		
pmol/l	22.4	16.8	28.0	Abbott Architect, 6 point calibration	
ng/dl	1.46	1.09	1.82		
pg/ml	14.6	10.9	18.2		
Free T4	pmol/l	45.4	34.1	56.8	Beckman Access
	ng/dl	3.54	2.66	4.42	
	pg/ml	35.4	26.6	44.2	
	pmol/l	40.7	30.5	50.9	Siemens Centaur XP/XPT/Classic
	ng/dl	3.17	2.38	3.96	
	pg/ml	31.7	23.8	39.6	
	pmol/l	64.9	48.7	81.1	Siemens Immulite 2000/2500
	ng/dl	5.06	3.80	6.32	
	pg/ml	50.6	38.0	63.2	
	pmol/l	41.9	31.4	52.4	Abbott Architect
	ng/dl	3.27	2.45	4.09	
	pg/ml	32.7	24.5	40.9	
	pmol/l	52.3	39.2	65.4	Beckman Dxl800
	ng/dl	4.08	3.06	5.10	
	pg/ml	40.8	30.6	51.0	

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Free T4	pmol/l	58.3	43.7	72.9	Roche Cobas e601/602
	ng/dl	4.55	3.41	5.69	
	pg/ml	45.5	34.1	56.9	
	pmol/l	59.3	44.5	74.1	Roche Cobas 4000/E411
	ng/dl	4.63	3.47	5.79	
	pg/ml	46.3	34.7	57.9	
	pmol/l	44.4	33.3	55.5	Siemens Atellica IM
	ng/dl	3.46	2.60	4.32	
	pg/ml	34.6	26.0	43.2	
	pmol/l	39.9	29.9	49.9	Abbott Alinity i
	ng/dl	3.11	2.33	3.89	
	pg/ml	31.1	23.3	38.9	
FSH	pmol/l	60.5	45.4	75.6	Roche Cobas e801
	ng/dl	4.72	3.54	5.90	
	pg/ml	47.2	35.4	59.0	
	mU/ml	58.7	47.0	70.4	BioMerieux Vidas
	mU/ml	67.4	53.9	80.9	Beckman Access
	mU/ml	44.9	35.9	53.9	Vitros Eci
	mU/ml	79.5	62.0	97.0	Siemens Centaur XP/XPT/Classic
	mU/ml	54.9	43.9	65.9	Siemens Immulite 2000/2500
	mU/ml	54.3	43.4	65.2	Abbott Architect
	mU/ml	61.0	48.8	73.2	Beckman Dxl800
	mU/ml	54.2	43.4	65.0	Roche Cobas 4000/E411
	mU/ml	50.3	40.2	60.4	Roche Cobas e601/602
mU/ml	83.9	67.1	101	Siemens Atellica IM	
mU/ml	53.2	42.6	63.8	Abbott Alinity i	
mU/ml	53.2	42.6	63.8	Roche Cobas e801	
Gentamicin	µmol/l	11.7	9.36	14.0	Gravimetric
	µg/ml	5.59	4.47	6.69	
Growth Hormone (GH)	µU/ml	42.1	33.7	50.5	Siemens Immulite 2000/2500
	ng/ml	14.0	11.2	16.8	
	µU/ml	38.1	30.5	45.7	Roche Cobas e601/602
	ng/ml	12.7	10.2	15.2	
	µU/ml	38.5	30.8	46.2	Diasorin Liaison XL
	ng/ml	12.8	10.3	15.3	
Immunoglobulin E	µU/ml	37.7	30.2	45.2	Roche Cobas e801
	ng/ml	12.6	10.1	15.1	
	KIU/l = IU/ml	574	344	804	Siemens Centaur XP/XPT/Classic
	KIU/l = IU/ml	592	474	710	Siemens Immulite 2000/2500
	KIU/l = IU/ml	525	420	630	Abbott Architect
	KIU/l = IU/ml	603	482	724	Roche Cobas 4000/E411
Insulin	KIU/l = IU/ml	576	461	691	Roche Cobas e601/602
	KIU/l = IU/ml	587	470	704	Roche Cobas e801
	mU/l	26.5	19.9	33.1	Siemens Centaur XP/XPT/Classic
	µU/ml	26.5	19.9	33.1	
mU/l	8.37	6.28	10.5	Siemens Immulite 2000	
µU/ml	8.37	6.28	10.5		



## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Insulin	mU/l	24.8	18.6	31.0	Beckman Access
	µU/ml	24.8	18.6	31.0	
	mU/l	22.8	17.1	28.5	Abbott Architect
	µU/ml	22.8	17.1	28.5	
	mU/l	29.6	22.2	37.0	Roche Cobas 4000/E411
	µU/ml	29.6	22.2	37.0	
	mU/l	29.5	22.1	36.9	Roche Cobas 6000/8000
	µU/ml	29.5	22.1	36.9	
Luteinising Hormone (LH)	mU/l	23.5	17.6	29.4	Beckman Dxl 600/800
	µU/ml	23.5	17.6	29.4	
	mU/l	21.1	15.8	26.4	Abbott Alinity i
	µU/ml	21.1	15.8	26.4	
	mU/ml	56.3	45.0	67.6	BioMerieux Vidas
	mU/ml	59.4	47.5	71.3	Vitros ECi
	mU/ml	51.5	39.7	63.3	Siemens Centaur XP/XPT/Classic
	mU/ml	74.1	59.3	88.9	Siemens Immulite 2000
Oestradiol	mU/ml	46.3	37.0	55.6	Abbott Architect
	mU/ml	43.1	34.5	51.7	Beckman Dxl800
	mU/ml	58.1	46.5	69.7	Roche Cobas 4000/E411
	mU/ml	57.2	45.8	68.6	Roche Cobas e601/602
	mU/ml	53.4	42.7	64.1	Siemens Atellica IM
	mU/ml	45.3	36.2	54.4	Abbott Alinity i
	mU/ml	57.6	46.1	69.1	Roche Cobas e801
	pmol/l	2548	2038	3058	BioMerieux Vidas
	pg/ml	693	554	832	
	pmol/l	2257	1806	2708	Vitros ECi
	pg/ml	614	491	737	
pmol/l	2160	1339	2981	Siemens Centaur XP/XPT/Classic	
pg/ml	588	365	811		
pmol/l	1116	893	1339	Abbott Architect	
pg/ml	304	243	365		
pmol/l	1341	1073	1609	Beckman Dxl800	
pg/ml	365	292	438		
pmol/l	1310	1048	1572	Roche Cobas e601/602 (Estradiol II)	
pg/ml	356	285	427		
pmol/l	1297	1038	1556	Roche Cobas 4000/E411 (Estradiol II)	
pg/ml	353	282	424		
pmol/l	2159	1339	2979	Siemens Centaur XP/XPT/Classic Enhanced (eE2)	
pg/ml	587	364	810		
pmol/l	1329	1063	1595	Roche Cobas e601/602 (Estradiol III)	
pg/ml	361	289	433		
pmol/l	1315	1052	1578	Roche Cobas 4000/E411 (Estradiol III)	
pg/ml	358	286	430		
pmol/l	1384	1107	1661	Beckman Access / Access 2 Sensitive B84493	
pg/ml	376	301	451		

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Oestradiol	pmol/l	1296	1037	1555	Beckman Dxl600/800 Sensitive B84493
	pg/ml	353	282	424	
	pmol/l	2188	1750	2626	Siemens Atellica IM
	pg/ml	595	476	714	
	pmol/l	1058	846	1270	Abbott Alinity i
	pg/ml	288	230	346	
pmol/l	1309	1047	1571	Roche Cobas e801 (Estradiol III)	
pg/ml	356	285	427		
Paracetamol	mmol/l	0.529	0.420	0.630	Gravimetric
	mg/l	80.0	63.5	95.3	
Phenobarbital	µmol/l	123	98.4	148	Abbott Architect
	µg/ml	28.5	22.8	34.2	
	µmol/l	130	104	156	Siemens Immulite 2000/2500
	µg/ml	30.2	24.1	36.3	
	µmol/l	121	96.8	145	Beckman AU400/600/640/2700/5400
	µg/ml	28.1	22.5	33.7	
µmol/l	121	96.8	145	Gravimetric	
µg/ml	28.1	22.5	33.6		
Phenytoin	µmol/l	94.3	75.4	113	Abbott Architect
	µg/ml	23.8	19.0	28.6	
	µmol/l	93.8	75.0	113	Roche Cobas 6000/8000
	µg/ml	23.7	18.9	28.5	
µmol/l	99.8	79.8	120	Gravimetric	
µg/ml	25.2	20.1	30.3		
Primidone	µmol/l	32.7	26.2	39.2	Gravimetric
	µg/ml	7.14	5.72	8.56	
Progesterone	nmol/l	148	118	178	BioMerieux Vidas
	ng/ml	46.3	36.9	55.7	
	nmol/l	102	81.6	122	Vitros ECI
	ng/ml	31.9	25.5	38.3	
	nmol/l	71.2	50.6	91.8	Siemens Centaur XP/XPT/Classic
	ng/ml	22.3	15.8	28.8	
	nmol/l	77.2	61.8	92.6	Siemens Immulite 2000/2500
	ng/ml	24.2	19.3	29.1	
	nmol/l	90.1	72.1	108	Abbott Architect
	ng/ml	28.2	22.6	33.8	
	nmol/l	97.2	77.8	117	Roche Cobas 4000/e411 (Prog. II)
	ng/ml	30.4	24.4	36.4	
	nmol/l	99.6	79.7	120	Roche Cobas e601/602 (Prog. II)
	ng/ml	31.2	24.9	37.5	
	nmol/l	85.8	68.6	103	Beckman Dxl Prog DE Cal A80773
	ng/ml	26.9	21.5	32.3	
nmol/l	99.4	79.5	119	Roche Cobas e601/602 (Prog. III)	
ng/ml	31.1	24.9	37.3		
nmol/l	99.4	79.5	119	Roche Cobas 4000/e411 (Prog. III)	
ng/ml	31.1	24.9	37.3		

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Range					
Analyte	unit	Target	low	high	methods
Progesterone	nmol/l	84.9	67.9	102	Abbott Alinity i
	ng/ml	26.6	21.3	31.9	
	nmol/l	98.5	78.8	118	Roche Cobas e801 (Prog. III)
	ng/ml	30.8	24.7	36.9	
Prolactin	µU/ml	1308	1046	1570	BioMerieux Vidas
	µU/ml	914	731	1097	Vitros ECi
	µU/ml	900	675	1125	Siemens Centaur XP/XPT/Classic
	µU/ml	890	712	1068	Siemens Immulite 2000/2500
	µU/ml	1109	887	1331	Abbott Architect
	µU/ml	858	686	1030	Beckman DxI800
	µU/ml	1114	891	1337	Roche Cobas 4000/E411
	µU/ml	1072	858	1286	Roche Cobas e601/602
	µU/ml	936	749	1123	Siemens Atellica IM
	µU/ml	1096	877	1315	Abbott Alinity i
PSA Free	ng/ml = µg/l	16.5	12.4	20.6	Abbott Architect
	ng/ml = µg/l	19.7	14.8	24.6	Beckman Access standardised to Hybritech
	ng/ml = µg/l	16.3	12.2	20.4	Siemens Centaur XP/XPT/Classic
	ng/ml = µg/l	15.1	11.3	18.9	Roche Cobas 4000/E411
	ng/ml = µg/l	15.2	11.4	19.0	Roche Cobas e601/602
	ng/ml = µg/l	15.0	11.3	18.8	Roche Cobas e801
PSA Total	ng/ml = µg/l	19.2	14.4	24.0	Beckman Access standardised to Hybritech
	ng/ml = µg/l	17.0	12.8	21.3	Siemens Centaur XP/XPT/Classic
	ng/ml = µg/l	18.2	13.7	22.8	bioMerieux VIDAS TPSA
	ng/ml = µg/l	16.5	12.4	20.6	Siemens Immulite 2000/2500 1st generation
	ng/ml = µg/l	14.3	10.7	17.9	Abbott Architect
	ng/ml = µg/l	18.1	13.6	22.6	Vitros ECi
	ng/ml = µg/l	17.8	13.4	22.3	Beckman DxI standardised to Hybritech
	ng/ml = µg/l	13.9	10.4	17.4	Beckman DxI800 standardised to WHO IRP96/670
	ng/ml = µg/l	19.2	14.4	24.0	Roche Cobas 4000/E411
	ng/ml = µg/l	18.6	14.0	23.3	Roche Cobas e601/602
	ng/ml = µg/l	18.2	13.7	22.8	Ortho Vitros 3600/5600/ECi PSA II
	ng/ml = µg/l	14.5	10.9	18.1	Abbott Alinity i
Salicylate	mmol/l	2.88	2.30	3.46	Gravimetric
	mg/dl	39.7	31.7	47.7	
SHBG	nmol/l	37.6	30.1	45.1	Siemens Immulite 2000/2500
	nmol/l	38.0	30.4	45.6	Abbott Architect
	nmol/l	37.9	30.3	45.5	Beckman DxI800
	nmol/l	34.3	27.4	41.2	Roche Cobas e801 - 413429
	nmol/l	34.7	27.8	41.6	Roche analysers - 413417/15
T Uptake	%U	37.7	30.9	44.5	Siemens Immulite 2000
Testosterone	nmol/l	38.7	31.0	46.4	Vitros ECi
	ng/ml	11.1	8.93	13.3	
	ng/dl	1115	893	1337	
	nmol/l	35.6	28.5	42.7	Siemens Immulite 2000/2500
	ng/ml	10.3	8.21	12.4	
	ng/dl	1025	821	1229	

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Testosterone	nmol/l	28.2	22.6	33.8	Abbott Architect
	ng/ml	8.12	6.51	9.73	
	ng/dl	812	651	973	
	nmol/l	22.1	17.7	26.5	Beckman Dxl800
	ng/ml	6.36	5.10	7.62	
	ng/dl	636	510	762	
	nmol/l	29.4	23.5	35.3	Roche Cobas 4000/e411 Test II
	ng/ml	8.47	6.77	10.2	
	ng/dl	847	677	1017	
	nmol/l	28.7	23.0	34.4	Roche Cobas e601/602 Test II
	ng/ml	8.27	6.62	9.92	
	ng/dl	827	662	992	
	nmol/l	27.7	22.2	33.2	Abbott Architect 2nd Generation
	ng/ml	7.98	6.39	9.57	
	ng/dl	798	639	957	
nmol/l	25.3	18.5	32.1	Siemens Centaur TST II	
ng/ml	7.29	5.32	9.26		
ng/dl	729	832	926		
nmol/l	28.1	22.5	33.7	Roche Cobas e801 Test II	
ng/ml	8.09	6.48	9.71		
ng/dl	809	648	971		
Theophylline	µmol/l	156	125	187	Roche Cobas 6000/8000
	µg/ml	28.1	22.5	33.7	
	µmol/l	166	133	199	Gravimetric
	µg/ml	29.9	24.0	35.9	
Thyroglobulin	ng/ml	31.7	23.8	39.6	Siemens Immulite 2000
	ng/ml	69.1	51.8	86.4	Roche Cobas e601/602
	ng/ml	69.8	52.4	87.3	Roche Cobas e601/602 Tg II
	ng/ml	79.7	59.8	100	Roche Cobas e801 Tg II
Thyroid Stimulating Hormone	µU/ml = mIU/l	13.9	11.1	16.7	bioMerieux VIDAS TSH
	µU/ml = mIU/l	19.3	15.4	23.2	Roche Elecsys
	µU/ml = mIU/l	18.5	14.8	22.2	Beckman Access hyperTSH 3rd Generation
	µU/ml = mIU/l	28.1	22.5	33.7	Vitros ECI
	µU/ml = mIU/l	21.8	14.8	28.8	Siemens Centaur XP/XPT/Classic
	µU/ml = mIU/l	19.4	15.5	23.3	Siemens Immulite 2000/2500
	µU/ml = mIU/l	17.5	14.0	21.0	Abbott Architect
	µU/ml = mIU/l	18.1	14.5	21.7	Beckman Access Fast TSH
	µU/ml = mIU/l	19.8	15.8	23.8	Roche Cobas 4000/E411
	µU/ml = mIU/l	19.5	15.6	23.4	Roche Cobas e601/602
	µU/ml = mIU/l	21.3	14.5	28.1	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml = mIU/l	17.7	14.2	21.2	Beckman Dxl 600/800 Access (3rd IS)
	µU/ml = mIU/l	20.6	16.5	24.7	Siemens Atellica IM
µU/ml = mIU/l	16.9	13.5	20.3	Abbott Alinity i	
µU/ml = mIU/l	19.0	15.2	22.8	Roche Cobas e801	

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Tobramycin	µmol/l	10.3	8.24	12.4	Gravimetric
	µg/ml	4.82	3.86	5.80	
Total Beta hCG	mU/ml=IU/l	602	482	722	BioMerieux Vidas
	IU/ml	0.602	0.482	0.722	
	mU/ml=IU/l	599	479	719	Vitros ECi
	IU/ml	0.599	0.479	0.719	
	mU/ml=IU/l	240	144	336	Siemens Centaur XP/XPT/Classic
	IU/ml	0.240	0.144	0.336	
	mU/ml=IU/l	687	550	824	Siemens Immulite 2000
	IU/ml	0.687	0.550	0.824	
	mU/ml=IU/l	270	216	324	Abbott Architect
	IU/ml	0.270	0.216	0.324	
	mU/ml=IU/l	568	454	682	Siemens Dimension
	IU/ml	0.568	0.454	0.682	
	mU/ml=IU/l	269	215	323	Beckman Dxl800
	IU/ml	0.269	0.215	0.323	
	mU/ml=IU/l	356	285	427	Roche hCG+Beta
	IU/ml	0.356	0.285	0.427	
	mU/ml=IU/l	289	231	347	Beckman Access Total BhCG (5th IS)
	IU/ml	0.289	0.231	0.347	
	mU/ml=IU/l	283	226	340	Beckman Dxl Total BhCG (5th IS)
	IU/ml	0.283	0.226	0.340	
mU/ml=IU/l	264	211	317	Abbott Alinity i	
IU/ml	0.264	0.211	0.317		
mU/ml=IU/l	344	275	413	Roche hCG+Beta e801	
IU/ml	0.344	0.275	0.413		
Total T3	nmol/l	5.39	4.04	6.74	Beckman Access
	ng/ml	3.51	2.63	4.39	
	ng/dl	351	263	439	
	nmol/l	6.77	5.08	8.46	Siemens Centaur XP/XPT/Classic
	ng/ml	4.41	3.31	5.51	
	ng/dl	441	331	551	
	nmol/l	5.07	3.80	6.34	Abbott Architect
	ng/ml	3.30	2.47	4.13	
	ng/dl	330	247	413	
	nmol/l	6.81	5.11	8.51	Vitros ECi
	ng/ml	4.43	3.33	5.53	
	ng/dl	443	333	553	
	nmol/l	6.49	4.87	8.11	Roche Cobas 4000/E411
	ng/ml	4.22	3.17	5.27	
	ng/dl	422	317	527	
	nmol/l	6.20	4.65	7.75	Roche Cobas e601/602
	ng/ml	4.04	3.03	5.05	
	ng/dl	404	303	505	
	nmol/l	5.02	3.77	6.28	Abbott Alinity i
	ng/ml	3.27	2.45	4.09	
ng/dl	327	245	409		

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Analyte	unit	Target	Range		methods
			low	high	
Total T3	nmol/l	6.33	4.75	7.91	Roche Cobas e801
	ng/ml	4.12	3.09	5.15	
	ng/dl	412	309	515	
Total T4	nmol/l	197	148	246	Vitros ECi
	µg/dl	15.4	11.5	19.3	
	ng/ml	154	115	193	
	nmol/l	174	122	226	Siemens Centaur XP/XPT/Classic
	µg/dl	13.6	9.52	17.7	
	ng/ml	136	95.2	177	
	nmol/l	191	143	239	Siemens Immulite 2000/2500
	µg/dl	14.9	11.2	18.6	
	ng/ml	149	112	186	
	nmol/l	165	124	206	Abbott Architect
	µg/dl	12.9	9.67	16.1	
	ng/ml	129	96.7	161	
	nmol/l	177	133	221	Roche Cobas 4000/E411
	µg/dl	13.8	10.4	17.2	
	ng/ml	138	104	172	
	nmol/l	169	127	211	Roche Cobas e601/602
	µg/dl	13.2	9.91	16.5	
	ng/ml	132	99.1	165	
nmol/l	165	124	206	Abbott Alinity i	
µg/dl	12.9	9.67	16.1		
ng/ml	129	96.7	161		
nmol/l	158	119	198	Roche Cobas e801	
µg/dl	12.3	9.28	15.3		
ng/ml	123	92.8	153		
Valproic Acid	µmol/l	1023	818	1228	Siemens Centaur XP/XPT/Classic
	µg/ml	148	118	178	
	µmol/l	932	746	1118	Abbott Architect
	µg/ml	134	108	160	
	µmol/l	934	747	1121	Roche Cobas 6000/8000
	µg/ml	135	108	162	
µmol/l	1116	893	1339	Gravimetric	
µg/ml	161	129	193		
Vancomycin	µmol/l	11.6	9.28	13.9	Abbott Architect
	µg/ml	17.2	13.8	20.6	
	µmol/l	9.89	7.91	11.9	Roche Cobas 6000/8000
	µg/ml	14.7	11.8	17.6	
	µmol/l	10.8	8.64	13.0	Gravimetric
	µg/ml	16.0	12.8	19.3	
Vitamin B12	pmol/l	581	465	697	Beckman Access
	pg/ml	787	630	944	
	pmol/l	741	556	926	Siemens Centaur XP/XPT/Classic
	pg/ml	1004	753	1255	

## IMMUNOASSAY PREMIUM PLUS LEVEL 3 (IA PREMIUM PLUS 3)

Cat. No. IA3111 / IA3112 Lot. No. 2028EC Size 12 x 5ml / 4 x 5ml Expiry 2023-11-28

Range					
Analyte	unit	Target	low	high	methods
Vitamin B12	pmol/l	643	514	772	Siemens Immulite 2000
	pg/ml	871	696	1046	
	pmol/l	634	507	761	Abbott Architect
	pg/ml	859	687	1031	
	pmol/l	655	524	786	Vitros ECi
	pg/ml	888	710	1066	
	pmol/l	587	470	704	Beckman Dxl800
	pg/ml	795	637	953	
	pmol/l	694	555	833	Roche Cobas 4000/e411 Gen II
	pg/ml	940	752	1128	
	pmol/l	719	575	863	Roche Cobas e601/602 Gen II
	pg/ml	974	779	1169	
	pmol/l	538	430	646	Abbott Alinity i
	pg/ml	729	583	875	
pmol/l	717	574	860	Roche Cobas e801 Gen II	
pg/ml	972	778	1166		