

Table 2. Detailed information for a subset of analytes most likely to be of interest to researchers conducting population-level, community-based health research. Prior publication of a method is no guarantee of future success—technologies change, reagents come and go, skills differ across laboratories.

Table 2 is updated annually. Please email Thom McDade (t-mcdade@northwestern.edu) with suggestions for analytes and/or references to add to this list.

Analyte	Volume/size	Stability @ RT	Stability @ 4C	Method	Lower Det	Intra-assay	Inter-assay	DBS/venous	Protocol	Reagents	Reference
androstenedione	4 x 2.5 mm	4 wks	>8 wks	RIA	0.012 ng/mL	9.5	10.7	yes	yes	yes	Worthman and Stallings 1997
	1 x 5.0 mm			RIA	4 nmol/L	<10	<10	no	yes	no	Thomson et al. 1989
	2 x 6.0 mm	>3 mos	>3 mos	RIA	0.6 nmol/L			yes	yes	no	Egan et al. 1989
apolipoprotein A-I	1 x 3.0 mm	1 day	1 day	ELISA		5.2	14	yes	yes	yes	Wang et al. 1989
	2 x 6.0 mm		1 mo	immunonephelometry				yes	yes	no	Van Biervliet et al. 1982
	1 x 3.2 mm			immuno-electrophoresis		3.9	13.9	yes	yes	no	Micic et al. 1988
apolipoprotein B	1 x 3.0 mm		20 days	ELISA		3.4	5.6	yes	yes	yes	Wang et a. 1989
	2 x 6.0 mm		1 mo	immunonephelometry				yes	yes	no	Van Biervliet et al. 1982
	1 x 3.0 mm			immuno-electrophoresis				yes	yes	yes	Dudman et al. 1985
	1 x 3.0 mm		2 wks	immunoturbidimetry		7.8	12.5	yes	yes	yes	Bangert et al. 1992
	1 x 3.0 mm			ELISA		5.2	7.8	yes	yes	no	Ohta et al. 1988
	1x 3.2 mm			immuno-electrophoresis		4.9	16.5	yes	yes	no	Micic et al. 1988
	1 x 2.5 mm	4 wks	>8 wks	RIA	0.46 ug/dL	9	9.2	yes	yes	yes	Worthman and Stallings 1997
2 x 3.2 mm			RIA	83 nmol/L	<11	<15	yes	yes	yes	Mitchell & Hermos 1998	
CD4+ lymphocytes	?			ELISA				yes	no	yes	Mwaba et al. 2003
C-reactive protein	1 x 5.0 mm	>12 wks	>12 wks	ELISA	0.019 mg/L			yes	no	yes	Beesley et al. 2000
	1 x 3.2 mm	>14 d	>14 d	ELISA	0.028 mg/L	5.8	8.2	yes	yes	yes	McDade et al. 2004
	2 x 3.2 mm			Luminex	1.1 ug/L	7.5	8.9	no	yes	yes	Skogstrand et al. 2005
	1 x 6.0 mm		>21d	ELISA	7.3 ng/mL	5.1	10.2	yes	yes	yes	Cordon et al. 1991
DHEA-S	1 x 2.5 mm	4 wks	>8 wks	RIA	8.0 ng/mL	7.5	9.4	yes	yes	yes	Worthman and Stallings 1997
Folate	2 x 6.35 mm	1 wk	1 wk	microbiological		6.5	7.7	yes	yes	yes	O'Broin and Gunter 1999
FSH	1 x 2.5 mm	>8 wks	>8 wks	FIA	0.13 IU/L	7.7	7.9	yes	yes	yes	Worthman and Stallings 1994
Epstein-Barr virus antibodies	1 x 3.2 mm	>8 wks	>8 wks	ELISA		5.6	7.7	yes	yes	yes	McDade et al. 2000
estradiol	8 x 1/8 in			RIA	2 pg/mL	7.57	8.22	yes	yes	yes	Shirtcliff et al. 2000
	4 x 2.5 mm	3 wks	>8 wks	RIA	9 pg/mL	8.6	7.5	yes	yes	yes	Worthman and Stallings 1997
glucose	1 x 6 mm	3 wks		colorimetric		3.5	6.4	yes	yes	yes	von Schenck et al. 1985

	1 x 6.5 mm	7 d		colorimetric		3.6	4.2	yes	yes	yes	Abyholm 1981
	1 x 6.0 mm			enzymic	0.26 mmol/L	2.9	3.1	yes	yes	yes	Burrin and Price 1984
	1 x 10 mm		>10 d	enzymatic fluorometric		3.0		yes	yes	yes	Burrin et al. 1981
glycosylated	1 x 3.0 mm	5 d	>10 d	HPLC				yes	yes	yes	Jeppsson et al. 1996
hemoglobin/HbA1c	1 x 1/2 in	3 mos		colorimetric		< 6.0	< 6.0	no	no	yes	Eross et al. 1984
	1 x 6.0 mm			affinity chromatography		5.28		yes	yes	yes	Little et al. 1986
hemoglobin	2 x 6.35 mm			spectrophotometric		2.1	3.4	no	yes	yes	O'Broin and Gunter 1999
hepatitis A antibodies	?			ELISA				yes	no	yes	Gil et al. 1997
	1 x 1 cm			RIA				yes	no	yes	Zoulek et al. 1985
	2 x 25 mm			ELISA				yes	yes	yes	de Almeida et al. 1999
hepatitis B antigen	25 uL	>30d	>30d	RIA				yes	no	no	Farzadegan et al. 1978
	1 x 3.0 mm			Luminex		21.0		yes	yes	yes	Lukacs et al. 2005
	1 x 1 cm			RIA				yes	no	yes	Zoulek et al. 1985
	~ 8 mm	14 d	14 d	RIA				yes	no	yes	Villa et al. 1980
hepatitis B antibodies	1 x 1 cm			RIA				yes	no	yes	Zoulek et al. 1985
	2 x 3.0 mm			haemagglutination				yes	yes	yes	Tappin et al. 1998
	~ 8 mm	14 d	14 d	RIA				yes	no	yes	Villa et al. 1980
hepatitis C antibodies	1 x 3.0 mm			Luminex		21.0		yes	yes	yes	Lukacs et al. 2005
	1 x 5.5 mm			ELISA				yes	yes	yes	Parker et al. 1997
	1 x 3.0 mm			ELISA				yes	yes	yes	McCarron et al. 1999
HIV antibodies	1 x 3.2 mm			Luminex			6.0	no	yes	yes	Bellisario et al. 2001
	1 x 3.0 mm			Luminex		21.0		yes	yes	yes	Lukacs et al. 2005
				Luminex			6.5	yes	yes	yes	Faucher et al. 2004
	5 x 1.0 cm			ELISA				yes	yes	yes	Varnier et al. 1988
	1 x 5.0 mm			ELISA				yes	yes	yes	Thongcharoen et al. 1992
	1 x 14 mm		> 3mos	ELISA/immunoblot				yes	no	no	Lindhardt et al. 1987
	1 x 1/8 in			EIA				yes	yes	yes	Fortes et al. 1989
	1 x 20 uL			SEGLISA				yes	yes	yes	Rocks et al. 1991
homocysteine	1 x 3 mm			LC-MS/MS		6.0	10.2	yes	yes	yes	McCann et al. 2003
IFNg	2 x 3.2 mm			Luminex	50 ng/L	6.7	24.5	no	yes	yes	Skogstrand et al. 2005
IgE	50 uL			RAST				yes	yes	no	Stapel et al. 2004
IGF-I	1 x 8 mm	>4 wks	>4 wks	ELISA		7.5	11.4	yes	yes	yes	Diamandi et al. 1998
	1 x 8 mm	>40 d	>40 d	ELISA				yes	yes	yes	Jones 2001
	2 x 3.18 mm	>5 d		RIA		8.1	8.7	yes	yes	yes	Schutt et al. 2003
	1 x 6.0 mm			ELISA				yes	yes	yes	Nindl et al. 2003
IGFBP-2	2 x 3.18 mm	>5 d		RIA		4.2	6.0	yes	yes	yes	Schutt et al. 2003

IGFBP-3	1 x 8 mm	>4 wks	>4 wks	ELISA		8.2	7.5	yes	yes	yes	Diamandi et al. 1998
	1 x 3.18 mm	>5d		RIA		7.6	4.6	yes	yes	yes	Schutt et al. 2003
IL-1b	2 x 3.2 mm			Luminex	26 ng/L	6.4	16.5	no	yes	yes	Skogstrand et al. 2005
IL-6	2 x 3.2 mm			Luminex	24 ng/L	7.6	16.5	no	yes	yes	Skogstrand et al. 2005
insulin	3 x 0.5 in			RIA		14.0	25.0	yes	yes	yes	
	2 x 3.0 mm			chemiluminescent	5.9 pmol/L	18.1	12.9	yes	yes	yes	Butter et al. 2001
Lipoprotein (a)	1 x 3.0 mm			ELISA	22 mg/L	4.5	4.4	yes	yes	yes	Wang et al. 1992
LH	1 x 2.5 mm	>8 wks	>8 wks	FIA	0.26 IU/L	7.3	8.9	yes	yes	yes	Worthman and Stallings 1994
PSA	5 x 3.0 mm	>24d	>24d	chemiluminescent	0.35 ug/L		11.7	yes	yes	yes	Hoffman et al. 1996
progesterone	8 x 1/8 in			RIA	0.015 ng/mL	8.8	12.7	yes	yes	yes	Shirtcliff et al. 2001
	1 x 5 mm	>9 wks	>9 wks	RIA	2.5 nmol/L	7.0	9.2	yes	yes	no	Petsos et al. 1985
prolactin	2 x 12 mm	>7d		immunoenzymetric				yes	yes	yes	Fisher et al. 1991
	1 x 7.5 mm			IRMA				yes	yes	yes	Ehsan et al. 1996
	2 x 3 mm	7d	>12 wks	RIA	2 ug/L	7.3	12.2	yes	yes	yes	Bassett et al. 1986
retinol	1 x 2.5 mm	3 wks	8 wks	FIA	0.11ng/mL	6.1	7.2	yes	yes	yes	Worthman and Stallings 1997
	1 x 6.35 mm	< 1 wk		HPLC	0.1 umol/L	<6	<6	yes	yes	yes	Erhardt et al. 2002
SHBG	1 x 2.5 mm	2 wks	>8 wks	FIA	0.2 nmol/L	13.2	14.5	yes	yes	yes	Worthman and Stallings 1997
somatomedin-C	1 x 3.2 mm			RIA	0.05 unit/mL	6.2	6.5	yes	yes	no	Mitchell et al 1987
testosterone	8 x 1/8 in			RIA	0.015 ng/mL	6.2	8.1	yes	yes	yes	Shirtcliff et al. 2001
	4 x 2.5 mm	3 wks	>8 wks	RIA	6.3 ng/dL	7.6	12.7	yes	yes	yes	Worthman and Stallings 1997
	2 x 20 uL	>1 wk		GCMS				yes	yes	yes	Peng et al. 2000
transferrin receptor	1 x 7.9 mm	>7 d		RIA	0.4 nmol/L	41.2	18.3	yes	yes	yes	
	2 x 3.2 mm	>4 wks	>4 wks	ELISA	0.55 mg/L	6.6	8.2	yes	yes	yes	McDade and SD 2002
thyrotropin (TSH)	25 uL	>4 wks	>4 wks	ELISA		4.5	5.6	yes	yes	no	Cook et al. 1998
	2 x 3.2			Luminex	0.7 mIU/L	4.9		no	yes	yes	Bellisario et al. 2000
thyroxine (T4)	1 x 3.0			RIA	10 mIU/L	7.1	12.7	yes	yes	no	Nagataki et al. 1980
	1 x 5.0 mm			chemiluminescence	2.9 mIU/L	10.4	7.4	no	yes	yes	Neto and Schulte 1998
	1 x 3.0 mm	<7wks	>11 wks	FIA				yes	yes	yes	Elnagar et al. 1997
	1 x 5.0 mm			EIA/FIA	1.25 mIU/L	7.8	6.9	yes	yes	yes	Tuuminen et al. 1991
	1 x 6.5 mm			EIA	3.5 mU/L	7.6	11.7	no	yes	yes	Torresani et al. 1986
	? x 3.0 mm			FIA		7.6	11.0	no	yes	yes	Torresani and Scherz 1986
	1 x 4.0 mm			IRMA	1.0 mU/L	7.8	7.7	no	yes	no	Jirkalova et al. 1996
	1 x 4.8 mm			immunoenzymetric	2.4 mU/L	7.5	8.7	no	yes	no	Jirkalova et al. 1996
thyroxine (T4)	1 x 1.0 cm			RIA	5 uU/mL			yes	yes	no	Irie et al. 1975
	2 x 5.0 mm			RIA	15 mU/L			yes	yes	yes	Beckers et al. 1979
	3 x 3.0 mm			EIA		11.8	15.0	no	yes	yes	Miyai et al. 1984
	2 x 3.2			Luminex	10.3 nmol/L	8.2		no	yes	yes	Bellisario et al. 2000
	1 x 3.0			RIA	10 ug/L	11.7	9.8	yes	yes	no	Nagataki et al. 1980

	1 x 4.25 mm			RIA	0.8 pmol/L	9.6	13.2	yes	yes	yes	Lemonnier et al. 1991
	1 x 9 mm	4 wks	4 wks	RIA	0.8 ng/L	5.3	6.2	yes	yes	yes	Mizuta et al. 1982
	2 x 3 mm	4 wks	1 wk	EIA	1.9 ng/L	7.6	6.4	yes	yes	no	Hata et al. 1985
	1 x 7.0 mm			RIA	1.5 pg/mL	6.6	9.0	yes	yes	yes	Pacchiarotti et al. 1988
	1 x 5.0 mm			RIA	8.37nmol/L			yes	yes	yes	Beckers et al. 1979
	1 x 3.0 mm			ELISA	1.25 ug/L	5.8	6.8	no	yes	no	Maeda et al. 1985
	1 x 2.0 mm			RIA				yes	yes	no	Obregon 1982
thyroglobulin	1 x 4.75 mm			FIA	1.42 ug/L	<10	<20	yes	yes	yes	Zimmermann et al. 2003
thyroxine binding globulin	1 x 6.5 mm			RIA	1.83 mg/L	6.7	5.7	yes	yes	yes	Torresani et al. 1983
triiodothyronine (T3)	1 x 4.25 mm		8 wks	RIA	0.48 pmol/L	13.6	16.0	yes	yes	yes	Laroche et al. 1988
	5 x 7.0 mm			RIA	1.5 pg/mL	9.4	9.8	yes	yes	yes	Pacchiarotti et al. 1988
TNFa	2 x 3.2 mm			Luminex	34 ng/L	5.6	18.0	no	yes	yes	Skogstrand et al. 2005