Newborn Screening Quality Assurance Program

Quality Control Specimen Certification
Set 2: July 9, 2012

MS/MS NON-DERIVATIZED

Enrichment Levels (endogenous not included)

Analyte	*Units*	*Lot*	*Base*	*Lot*	*Low*	*Lot*	*Intermediate*	*Lot*	*High*
Phenylalanine	µmol / L blood	221	0	222	150	223	400	224	600
Leucine	µmol / L blood	221	0	222	200	223	500	224	800
Methionine	µmol / L blood	221	0	222	100	223	250	224	500
Tyrosine	µmol / L blood	221	0	222	250	223	500	224	750
Valine	µmol / L blood	221	0	222	250	223	600	224	1000
Citrulline	µmol / L blood	221	0	222	50	223	150	224	300
Alanine	µmol / L blood	221	0	222	250	223	500	224	750
Succinylacetone	µmol / L blood	221	0	222	2.5	223	5	224	10

Analytical Information

Lot Numbers, Mean Values (X) and 95% Confidence Limits (CL)											
Analyte	*Lot*	*Mean and 95% CL*		*Lot*	*Mean and 95% CL*		*Lot*	*Mean and 95% CL*		*Lot*	*Mean and 95% CL*
Phe*	221	$\bar{X}$ =	73.9	222	$\bar{X}$ =	196.4	223	$\bar{X}$ =	389.5	224	$\bar{X}$ = 520.8
		CL=	58.8 - 89.0		CL=	166.0 - 226.8		CL=	290.2 - 488.7		CL= 392.9 - 648.7
Leu*	221	$\bar{X}$ =	186.9	222	$\bar{X}$ =	366.3	223	$\bar{X}$ =	613.9	224	$\bar{X}$ = 844.1
		CL=	139.7 - 234.0		CL=	282.0 - 450.6		CL=	458.2 - 769.7		CL= 727.6 - 960.6
Met*	221	$\bar{X}$ =	20.9	222	$\bar{X}$ =	103.6	223	$\bar{X}$ =	224.7	224	$\bar{X}$ = 410.3
		CL=	14.9 - 26.9		CL=	79.7 - 127.4		CL=	142.1 - 307.4		CL= 283.8 - 536.8
Tyr*	221	$\bar{X}$ =	50.6	222	$\bar{X}$ =	223.8	223	$\bar{X}$ =	374.3	224	$\bar{X}$ = 567.3
		CL=	38.8 - 62.3		CL=	144.8 - 302.9		CL=	292.3 - 456.3		CL= 400.1 - 734.6
Val*	221	$\bar{X}$ =	150.2	222	$\bar{X}$ =	318.5	223	$\bar{X}$ =	564.2	224	$\bar{X}$ = 807.0
		CL=	117.2 - 183.3		CL=	239.1 - 398.0		CL=	436.4 - 692.0		CL= 682.1 - 932.0
Cit*	221	$\bar{X}$ =	30.1	222	$\bar{X}$ =	73.0	223	$\bar{X}$ =	164.9	224	$\bar{X}$ = 291.6
		CL=	22.4 - 37.8		CL=	52.0 - 94.0		CL=	92.3 - 237.6		CL= 213.8 - 369.4
Ala*	221	$\bar{X}$ =	372.1	222	$\bar{X}$ =	508.6	223	$\bar{X}$ =	726.5	224	$\bar{X}$ = 841.4
		CL=	267.1 - 477.1		CL=	361.6 - 655.6		CL=	505.5 - 947.5		CL= 604.1 - 1078.7
SUAC*	221	$\bar{X}$ =	0.3	222	$\bar{X}$ =	1.2	223	$\bar{X}$ =	2.0	224	$\bar{X}$ = 3.6
		CL=	0.2 - 0.4		CL=	1.0 - 1.4		CL=	1.6 - 2.5		CL= 3.0 - 4.2

**** Analysis Method: MS/MS NON-DERIVATIZED - MS/MS non-kit***

Note: The values provided in the above tables are for reference use only. The mean value and confidence limits (CL) are determined by CDC for each Quality Control (QC) lot. Each participating laboratory must establish its own mean values and CL for its test method with these QC materials. Temporary estimates of mean values and CL can be determined after 20 successive, independent measurements. *Slazyk WE, Hannon WH. Quality Assurance in the newborn screening laboratory. In: Therrell BL Jr., editor. Laboratory methods for neonatal screening, Washington DC, American Public Health Association, 1993, 23-46.*