

Newborn Screening Quality Assurance Program
 Second-tier Methylmalonic/Propionic Acidemia and Homocystinuria Quality Control Specimen Certification
 Set 2 – July 2016
Analysis Method: LC-MS/MS
Material Expiration Date: September 2017

ENRICHMENT LEVELS (endogenous levels not included)

Lot ($\mu\text{mol/L}$ blood)	Methylmalonic Acid (MMA2)	Ethylmalonic Acid (EMA2)	2-Methylcitric Acid (MCA2)	Total Homocysteine (tHCY2)
A1614	0	0	0	0
B1614	5	5	2.5	5
C1614	10	10	5	10
D1614	25	25	12.5	25
E1614	50	50	25	50

ANALYTICAL INFORMATION

<i>Lot Numbers, Mean Values (\bar{x}), and 95% Confidence Limits (CL).</i>				
Lot ($\mu\text{mol/L}$ blood)	Methylmalonic Acid (MMA2)	Ethylmalonic Acid (EMA2)	2-Methylcitric Acid (MCA2)	Total Homocysteine (tHCY2)
	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>
A1614	$\bar{x} = 0.29$ CL = 0.00 – 0.85	$\bar{x} = 0.26$ CL = 0.00 – 0.95	$\bar{x} = 0.28$ CL = 0.00 – 0.73	$\bar{x} = 7.45$ CL = 5.06 – 9.83
B1614	$\bar{x} = 4.45$ CL = 2.49 – 6.41	$\bar{x} = 4.71$ CL = 2.98 – 6.43	$\bar{x} = 2.40$ CL = 1.28 – 3.52	$\bar{x} = 11.08$ CL = 8.10 - 14.05
C1614	$\bar{x} = 8.19$ CL = 4.92 – 11.46	$\bar{x} = 8.91$ CL = 4.81 – 13.02	$\bar{x} = 4.44$ CL = 2.95 – 5.94	$\bar{x} = 14.90$ CL = 9.44 – 20.35
D1614	$\bar{x} = 19.71$ CL = 14.67 – 24.75	$\bar{x} = 20.60$ CL = 15.60 – 25.60	$\bar{x} = 11.16$ CL = 7.61 – 14.70	$\bar{x} = 25.39$ CL = 16.71 – 34.07
E1614	$\bar{x} = 37.70$ CL = 28.86 - 46.55	$\bar{x} = 38.15$ CL = 29.21 – 47.09	$\bar{x} = 21.79$ CL = 16.49 – 27.08	$\bar{x} = 42.71$ CL = 29.75 – 55.66

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 10 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.*