

TURN ON YOUR LYTES... WITHOUT THE ELECTRICITY

SODIUM

POTASSIUM

LITHIUM

CARBON DIOXIDE



INTRODUCING AN ALTERNATIVE TO HIGH PRICED ISE ASSAYS

- Accurate and Precise
- Low Cost per test
- Extensive range of instrument parameters
- Packaging options for labs of all sizes



INNOVATIONS IN CLINICAL DIAGNOSTICS

DIAZYME ENZYMATIC ELECTROLYTES

	Sodium	Potassium	Lithium	CO ₂
Method	Enzymatic - A sodium dependent β-galactosidase cleaves ONPG substrate. The product O-nitrophenyl is read at 405 nm and is proportional to the sodium concentration	Enzymatic – A potassium dependent pyruvate kinase catalyzes the conversion of NADH analog to NAD analog which is measured at 380 nm and is proportional to the potassium concentration	Enzymatic - A lithium sensitive phosphatase catalyzes the conversion of adenosine biphosphate (PAP) to hypoxanthine and hydrogen peroxide which is then quantified by a Trinder reaction	The assay is based on a coupled reagent with phosphoenolpyruvate carboxylase (PEPC) and malate dehydrogenase (MDH). The decrease in absorbance at 405 or 415 nm is directly proportional to CO ₂ concentration in the sample
Traceability	Sodium calibrator and control are traceable to NIST standard and an ISE method	Potassium calibrator and control are traceable to NIST standard and an ISE method	Lithium calibrator and control are traceable to NIST standard and an ISE method	CO ₂ calibrator and control are traceable to NIST standard and an ISE method
Method Correlation to Predicate	R ² = 0.9801 regression y = 1.0516x - 2.2343	R ² = 0.98 regression y = 1.07x - 0.30	R ² = 0.99 regression y = 1.03x - 0.04	R ² = 0.99 regression y = 1.0447x - 0.9742
Precision	The Within-Run CVs 1.2% at 137 mmol/L 1.1% at 160 mmol/L The total CVs 1.56% at 137 mmol/L 1.65% at 160 mmol/L	The Within-Run CVs 1.12% at 4.46 mmol/L 1.20% at 6.86 mmol/L The total CVs 1.77% at 4.46 mmol/L 1.77% at 6.86 mmol/L	The Within-Run CVs 4.3% at 1.0 mmol/L 1.2% at 2.5 mmol/L The total CVs 4.8% at 1.0 mmol/L 1.3% at 2.5 mmol/L	The Within-Run CVs 2.3% at 25 mmol/L 2.3% at 40 mmol/L The total CVs 2.8% at 25 mmol/L 3.3% at 40 mmol/L
On-Board Stability*	4 weeks	2 weeks	8 weeks	4 weeks
Calibrator	Liquid stable calibrator set, no serial dilutions are required	Liquid stable calibrator set, no serial dilutions are required	Liquid stable calibrator set, no serial dilutions are required	Liquid stable calibrator set, no serial dilutions are required
Sample Type	Serum	Serum	Serum	Serum, Heparinized Plasma
Sample Volume	8 uL	5 uL	5 uL	3 uL
Assay Range	Linear range of 80 - 180 mmol/L	Linear range of 2 - 8 mmol/L	0.19 - 3.0 mmol/L	1.12 - 50 mmol/L
Instrument Specific Packaging	Universal kit packaging	Universal kit packaging	Universal kit packaging Beckman • Synchron Roche • Hitachi	Universal kit packaging Beckman • Synchron • AU
Regulatory Status	• 510 (k) Cleared • CE	• 510 (k) Cleared • CE	• 510 (k) Cleared • CE • Health Canada	• 510 (k) Cleared • CE

*Analyzer Dependent



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MK040 Rev. E