

**MISSION Trinity™ B**  
**Blood Gas, Electrolyte, Metabolite,**  
**CO-Oximeter (Bayer) Control**  
**Level 2**  
 PN: DD-96002D

LOT: R6K114  
 Exp: 2009/10

Expected Ranges Chart	pH			pCO <sub>2</sub> mmHg			pO <sub>2</sub> mmHg			Na <sup>+</sup> mmol/L			K <sup>+</sup> mmol/L			Ca <sup>++</sup> mmol/L			Cl <sup>-</sup> mmol/L			Glucose mg/dL			Lactate mmol/L		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
<b>Blood Gas/ISE Analyzers</b>																											
<b>AVL Scientific</b>																											
945, 947	7.37	7.35	7.39	40	35	45	100	90	110																		
990, 995	7.37	7.35	7.39	40	35	45	100	90	110																		
<b>Ciba-Corning/Bayer</b>																											
238	7.36	7.33	7.39	38	33	43	105	95	115																		
248	7.354	7.332	7.376	39	34	44	93	83	103																		
348	7.342	7.322	7.362	37	32	42	96	88	104	150	145	155	4.54	4.04	5.04	1.34	1.18	1.50	107	101	113						
278	7.356	7.336	7.376	38	33	43	106	96	116																		
280	7.353	7.333	7.373	38	33	43	108	98	118																		
288	7.355	7.335	7.375	38	33	43	106	96	116	148	143	153	4.47	3.97	4.97	1.22	1.06	1.38	103	97	109						
614										150	145	155	4.39	3.89	4.89												
644										149	144	154	4.36	3.86	4.86				100	94	106						
634	7.38	7.34	7.42												1.24	1.10	1.38										
800 Series*	7.370	7.350	7.390	40	35	45	101	93	109	147	142	152	4.47	3.97	4.97	1.22	1.06	1.38	99	93	105	98	88	108	0.91	0.67	1.15
Rapid 400, 405	7.338	7.308	7.368	40	35	45	108	100	116	155	150	160	4.62	4.32	4.92	1.25	1.13	1.37	104	98	110	94	84	104			
<b>IL</b>																											
1304, 1306, 1312	7.34	7.31	7.37	38	33	43	98	90	106																		
BG3	7.34	7.31	7.37	38	33	43	98	90	106																		
BGE	7.34	7.31	7.37	38	33	43	97	89	105	150	145	155	4.54	4.04	5.04	1.34	1.18	1.50	107	101	113						
<b>Radiometer</b>																											
ABL 3, 30	7.34	7.31	7.37	38	33	43	103	93	113																		
ABL 300, 330	7.34	7.31	7.37	38	33	43	103	93	113																		
ABL 500	7.34	7.31	7.37	38	33	43	103	93	113																		

CO-oximeters	ctHb (tHb) g/dL			FO2Hb (O2Hb) %			FCOHb (COHb) %			FMetHb (MetHb) %			FHhb (HHb) %		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
<b>Ciba-Corning/Bayer</b>															
270	13.9	12.5	15.3	71.5	68.5	74.5	2.6	-2.4	7.6	14.2	9.6	18.8	12	7	17
800 Series/Rapidlab® 800	13.9	12.9	14.9	92.3	86.3	98.3	4.2	1.2	7.2	2	-1	5	1.3	-1.7	4.3
Rapidpoint 405®	13.8	12.8	14.8	95.6	91.6	99.6	1.3	-1.7	4.3	0.9	-2.1	3.9	2.3	-0.7	5.3

\*Includes 840, 845, 850, 855, 860, 865, Rapidlab® Analyzers

**Manufacturer and Product Information**

Mission Diagnostics  
A Division of Diamond Diagnostics, 333 Fiske Street, Holliston, MA.  
**For Technical Assistance call:**  
Diamond Diagnostics Technical Services at 1-508-429-0450

**Intended Use:** MISSION Trinity B™ Blood Gas, Electrolyte, Metabolite, CO-Oximeter Control is an assayed quality control material used for monitoring the performance of blood gas, electrolyte, metabolite, and CO-Oximeter (Bayer) instrumentation for the analytes and analyzers listed on the Expected Values Chart.

**Product Description:** This control material is provided in three (3) distinct levels of pH, pCO<sub>2</sub>, pO<sub>2</sub>, Na<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>, Ca<sup>++</sup>, glucose, lactate, tHb, O<sub>2</sub>Hb, COHb, metHb and HHb covering the significant range of the instrument performance. It is packaged in sealed glass ampules, each containing 1.8 ml of solution.

**Active Ingredients:** MISSION Trinity B™ is a buffered solution of electrolytes, glucose, lactate and dyes. It has been equilibrated with specific levels of CO<sub>2</sub>, O<sub>2</sub>, and N<sub>2</sub>. This control contains no human or biological materials.

**For in vitro diagnostics use.**

**Directions for Use**

The control should be brought to a temperature of 20-23°C before use (see instructions regarding Expected Ranges). Allow at least four (4) hours for ampules to equilibrate to this temperature prior to testing.

For pH/blood gas values, the control should be analyzed within one (1) minute of opening. For electrolyte measurements, this product is stable for up to one (1) hour after opening.

Follow the procedures listed below:

1. Before use, hold the ampule at the top and bottom (with forefinger and thumb) and shake 15-20 times (about 10 seconds) to mix the solution. Tap the ampule to restore the liquid to the bottom on the ampule.
2. Open the ampule by snapping off the tip at the score. Use gauze, tissue, gloves, or an appropriate ampule opener to protect fingers from cuts.
3. Immediately introduce the liquid from the ampule to the analyzer. Follow the manufacturer's instructions for sampling a control material. Depending on the sampling procedure chosen, the following instructions apply:
  - a. Direct Aspiration: Sample the control directly from the ampule.
  - b. Syringe Transfer:
    - i. Use a clean, gas-tight syringe attached to a clean, blunt syringe needle (if available).
    - ii. Prime the syringe by slowly aspirating a small amount (0.2-0.3 ml) of solution from the ampule.
    - iii. Discard this liquid, leaving the dead space of the syringe filled with the control.
    - iv. Aspirate the control from the ampule into the primed syringe. Be careful that air is not drawn in with the liquid. Expel 1 to 2 drops, detach the needle and immediately inject the control into the analyzer sample port.
  - c. Ampule Injector/Dispenser: Assemble and fill the ampule injector following the manufacturer's instructions. Expel one or two drops to rinse the outlet tip and inject the control into the analyzer sample port.
  - d. Capillary Mode:
    - i. Install the appropriate adapter for micro sampling onto the instrument.
    - ii. Sample the contents of the ampule following the recommendations of the instrument manufacturer. Be certain to keep the sampling tip of the adapter below the surface of the liquid during aspiration.

**Limitations**

**Limitations:**

1. This control is sensitive to many instrument related factors that affect analytical results. Because it is not a blood-based material, it may not detect certain malfunctions, which would affect the testing of blood.
2. This product is intended for use as a quality control material and can assist in evaluating the performance of laboratory instruments. It is not for use as a calibration standard and its use should not replace other aspects of a complete quality control program.

**Storage:**

The expiration date stated on the Trinity B™ Control packaging is for product stored at 2-8°C. Avoid exposure to freezing and temperatures greater than 30°C.

**Expected Ranges:**

The values for each analyte on the enclosed Expected Values Chart are based on multiple determinations performed on randomly selected samples from each lot. The listing for each instrument represents the expected range for ampoules that are at 25°C when tested. (Note: pO<sub>2</sub> values will vary inversely by about one percent (1%) per degree Celsius that the temperature of the ampoules varies from 25°C.)

The Expected Ranges are provided as a guide in evaluating analyzer performance. Since instrument design and operating conditions may vary, each laboratory should establish its own acceptance criteria.

