

MISSION CONTROL™
Blood Gas and Electrolyte Control

Level 2
 PN: DD-92002D

LOT: MC-1006
 Exp: 2010/03

Expected Ranges Chart

Blood Gas/ISE Analyzers	pH			pCO ₂ mmHg			pO ₂ mmHg			Na ⁺ mmol/L			K ⁺ mmol/L			Ca ⁺⁺ mmol/L			Cl ⁻ mmol/L			Li ⁺ mmol/L			tCO ₂ 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		
AVL Scientific																													
945, 947	7.279	7.249	7.309	56	51	61	113	103	123																				
990, 995	7.279	7.249	7.309	56	51	61	111	101	121																				
Compact Series																													
982, 983, 985	7.289	7.259	7.319	57	52	62	111	101	121																				
986										142	137	147	4.3	3.8	4.8						107	102	112	1.07	0.92	1.22			
984, 987	7.289	7.259	7.319							146	141	151	4.4	3.9	4.9						105	100	110				28	24	32
OMNI	7.299	7.269	7.329	56	51	61	103	91	115	142	137	147	4.4	3.9	4.9	1.16	1.01	1.31			108	103	114						
9110, 9140	7.299	7.269	7.329							141	136	146	4.3	3.8	4.8	1.16	1.06	1.26											
9120, 9130										142	137	147	4.3	3.8	4.8	1.14	0.99	1.29											
9180, 9181										134	129	139	4.1	3.6	4.6						106	101	111	1.15	1.00	1.30			
Ciba-Corning/Bayer																													
238	7.31	7.28	7.34	56	50	62	105	95	115																				
248	7.309	7.279	7.339	56	50	62	100	90	110																				
348	7.309	7.279	7.339	56	50	62	108	98	118	138	133	143	4.2	3.7	4.7	1.16	1.01	1.31			106	101	111						
278	7.319	7.289	7.349	56	51	61	108	98	118																				
280	7.319	7.289	7.349	56	51	61	108	98	118																				
288	7.319	7.289	7.349	56	51	61	108	98	118	137	132	142	4.2	3.7	4.7	1.16	1.01	1.31			106	101	111						
664										139	134	144	4.2	3.7	4.7						104	99	109				28	24	32
614, 644										138	133	143	4.2	3.7	4.7						105	100	110						
634	7.33	7.30	7.36												1.19	1.04	1.34												
654										138	133	143	4.2	3.7	4.7								1.07	0.92	1.22				
800 Series*	7.329	7.299	7.359	56	50	62	109	99	119	135	130	140	4.2	3.7	4.7	1.11	1.01	1.21			104	99	109						
Rapid 400, 405	7.329	7.299	7.359	56	50	62	109	99	119	135	130	140	4.2	3.7	4.7	1.11	1.01	1.21			104	99	109						
IL																													
1304, 1306, 1312	7.299	7.269	7.329	55	50	60	108	98	118																				
BG3	7.299	7.269	7.329	56	51	61	107	97	117																				
BGE	7.299	7.269	7.329	56	51	61	106	96	116	136	131	141	4.0	3.5	4.5	1.14	1.04	1.24			102	97	107						
1610, 1620	7.299	7.269	7.329	56	51	61	108	98	118																				
1630, 1640, 1650	7.299	7.269	7.329	56	51	61	105	95	115	138	133	143	4.0	3.5	4.5	1.14	1.04	1.24			102	97	107						
Synthesis 10, 15, 20, 25	7.299	7.269	7.329	52	47	57	113	103	123	138	133	143	4.0	3.5	4.5	1.14	1.04	1.24			102	97	107						
GEM Premier	7.298	7.268	7.328	57	52	62	111	101	121	139	134	144	4.1	3.6	4.6	1.16	1.01	1.31											
GEM 3000	7.298	7.268	7.328	57	52	62	111	101	121	139	134	144	4.1	3.6	4.6	1.16	1.01	1.31											
ITC																													
IRMA TRUpoint	7.33	7.30	7.36	56	49	63	116	104	128																				
NOVA																													
Electrolyte Systems	7.309	7.279	7.339							140	135	145	4.3	3.8	4.8	1.16	1.06	1.26			106	101	111	1.13	0.98	1.28	28	24	32
Stat Profile 1-5	7.309	7.279	7.339	56	49	63	103	93	113	139	134	144	4.3	3.8	4.8	1.16	1.06	1.26			102	97	107						
Osmetech																													
Opti 1	7.37	7.33	7.41	55	48	62	109	97	121	141	136	146	4.4	3.9	4.9	1.11	0.96	1.26			105	100	110						
Opti CCA	7.37	7.33	7.41	56	49	63	107	95	121	141	136	146	4.4	3.9	4.9	1.11	0.96	1.26			105	100	110						
Radiometer																													
ABL 3, 30	7.309	7.279	7.339	55	50	60	111	101	121																				
ABL 300, 330	7.309	7.279	7.339	55	50	60	108	98	118																				
ABL 5	7.29	7.26	7.32	55	50	60	105	95	115																				
ABL, 50, 500, 510, 520	7.299	7.269	7.329	56	51	61	110	100	120																				
ABL 505	7.299	7.269	7.329	56	51	61	110	100	120	137	132	142	4.2	3.7	4.7	1.18	1.08	1.28											
ABL555	7.299	7.269	7.329	56	51	61	110	100	120	137	132	142	4.2	3.7	4.7	1.18	1.08	1.28											
ABL 600, 610, 620	7.299	7.269	7.329	56	51	61	110	100	120	137	132	142	4.2	3.7	4.7	1.18	1.08	1.28			100	95	104						
ABL 70	7.31	7.28	7.34	55	50	60	103	93	113	140	135	145	4.3	3.8	4.8	1.15	1.05	1.25			98	93	103						
ABL 77	7.31	7.28	7.34	55	50	60	103	93	113	140	135	145	4.3	3.8	4.8	1.15	1.05	1.25			98	93	103						
EML-100										137	132	142	4.2	3.7	4.7	1.18	1.08	1.28			99	94	104						
ABL 70, 77	7.31	7.28	7.34	55	50	60	103	93	113	140	135	145	4.3	3.8	4.8	1.15	1.05	1.25			98	93	103						
ABL 700 Series**	7.299	7.269	7.329	56	51	61	105	95	115	137	132	142	4.2	3.7	4.7	1.18	1.08	1.28			99	94	104						
i-STAT																													
BG, E+	7.313	7.283	7.343	56	51	61	110	100	120	140	135	145	4.3	3.8	4.8	1.18	1.08	1.28			102	97	107						
proLYTE																													
proLYTE										142	137	148	4.2	3.9	4.5						98	93	103						
Medica, iLyte, Menarini																													
EasyLyte Na/K, Na/K/Cl, Na/K/Li, Na/K/Cl/Li										140	135	145	4.3	4.0	4.6						102	97	107	1.16	1.10	1.22			

*Includes 840, 845, 850, 855, 860, 865 Analyzers

**Includes 705, 710, 715, 720, 725

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Manufacturer and Product Information

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

Intended Use: MISSION CONTROL™ Blood Gas and Electrolyte Control is an assayed quality control material intended for monitoring the measurements of pH pCO₂, pO₂ in blood gas analyzers and sodium, potassium, chloride, lithium, ionized calcium and total carbon dioxide in ISE electrolyte analyzers.

Product Description: This control material is provided for monitoring analyzer performance. It is packaged in sealed glass ampules, each containing approximately 2 ml of solution. Ampules are packaged 10 per tray with each box containing 3 trays, for a total of 30 ampules per box.

Active Ingredients: MISSION CONTROL™ is a buffered solution of electrolytes (Na⁺, K⁺, Cl⁻, Ca⁺⁺, Li⁺, HCO₃⁻/CO₃⁻²). It has been equilibrated with specific levels of CO₂, O₂, and N₂. This control contains no human-based 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

Limitation:

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:

Store at 18-25°C. Avoid freezing and exposure to temperatures greater than 30°C. You may also store at 4-25°C without adverse effect.

Expected Ranges:

The values for each control analyte on the enclosed Expected Ranges Chart are based on multiple determinations performed on randomly selected samples from each lot. The listing for each instrument represents the expected range for these ampules when tested at 23°C. (Note: pO₂ values will vary inversely by about one percent (1%) per degree C that the temperature of the ampules varies from 23°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 expected values and control limits. The mean value established should fall within the Expected Ranges shown on the chart.

