

Please enter these calibration parameters and the Lot No. into the BioLector software!

pH calibration parameters Lot No.2214101 (BioLector II/Pro Microbioreactor, filter module ID-202/402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.86	63.78	63.70	63.62	63.54	63.46	63.38
φ max	15.11	15.13	15.14	15.16	15.17	15.18	15.20
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.60	6.59	6.58	6.58	6.57	6.57	6.56

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.30	63.22	63.15	63.07	62.99	62.91	62.83
φ max	15.21	15.23	15.24	15.25	15.27	15.28	15.30
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.55	6.55	6.54	6.54	6.53	6.53	6.52

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.75	62.67	62.59	62.51	62.43	62.35	62.27
φ max	15.31	15.33	15.34	15.35	15.37	15.38	15.40
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.51	6.51	6.50	6.50	6.49	6.48	6.48

pH sensor properties

Dynamic range	pH 4.75 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20 - 5.45 ; ± 0.1 pH at pH 5.45 - 7.30 ; ± 0.25 pH at pH 7.30 - 7.55 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 7	< 0.005 pH per day (sampling interval of 6 min)
Temperature range	5 °C to 50 °C
Compatibility	Aqueous solutions, ethanol, methanol (max. 5 % v/v)
Sensor stability	Sensor material can be degraded by some microorganisms
Cross-sensitivity	Reduced to ionic strength (salinity); high concentration of fluorescent molecules in the visible range can interfere (GFP, (e)YFP); complex media can cause a pH-shift (peptone, yeast extract)
Basic material	pH sensor HP8-2148-01 (at least stable for 7 days with CertiPUR-buffer) pH sensors are light-sensitive; please protect them from direct light!

pH calibration

Buffer	CertiPUR Reference Material Buffer solutions Set (pH 3.00 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.32 (pH Ser. 3567, gain 7)
Date of calibration	2022-12-12

Contact us

If you have any questions, contact Beckman Coulter Customer Support Center:

- Worldwide, find out in our website at: www.beckman.de/support/technical
- In the USA and Canada, call us at 1-800-369-0333
- Outside the USA and Canada, contact your local Beckman Coulter representative

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DO calibration parameters Lot No.2214101 (BioLector II/Pro Microbioreactor, filter module ID-203/403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.93	72.88	72.84	72.79	72.74	72.69	72.64
φ cal100	44.71	44.45	44.19	43.93	43.67	43.41	43.15

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.60	72.55	72.50	72.45	72.40	72.36	72.31
φ cal100	42.89	42.63	42.37	42.11	41.85	41.59	41.33

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.26	72.21	72.16	72.12	72.07	72.02	71.97
φ cal100	41.07	40.81	40.55	40.29	40.03	39.77	39.51

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O ₂ (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O ₂ per day (sampling interval of 6 min)
Response time (t ₉₀)	< 30 s
Temperature range	5 – 50°C
Sensor stability	Sensor material can be degraded by some microorganisms
Cross-sensitivity to	Organic solvents, such as acetone, toluene, chloroform or methylene chloride, Chlorine gas; high concentration of fluorescent molecules in the visible range can interfere (mCherry, tdTomato, dsRed, Nile red); complex media can cause a DO-shift
Basic material	Oxygen sensor PSt3-HG-1921-01_5 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Two-point calibration at an oxygen-free environment (1.0 M sulfite system) and an air-saturated environment (21% oxygen with QC buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH1 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.87 (DO Ser. 4446, gain 7)
Date of calibration	2022-12-12

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3042
Date of sterilization	2022-11-14

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