Calibration Data Sheet: pH and DO optodes Lot No. 1309
(calibration for HC filter sets)

from microreactor to process

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

DO calibration parameters Lot No. 1309

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.89	69.01	69.13	69.25	69.37	69.49	69.61
ϕ cal100	46.90	46.62	46.35	46.08	45.80	45.53	45.26
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	69.73	69.85	69.96	70.08	70.20	70.32	70.44
ϕ cal100	44.99	44.71	44.44	44.17	43.89	43.62	43.35
Temperature	**34°C**	**345C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	70.56	70.68	70.80	70.92	71.04	71.16	71.28
ϕ cal100	43.07	42.80	42.53	42.26	41.98	41.71	41.44

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O_2 (software)
Accuracy	± 2 % dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.03% O_2 within 30 days (sampling interval of 1 min)
Response time (t90)	< 30 s
Temperature range	0 – 50°C
Sensor stability	sensor material can be destructed 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-1326-02 (at least stable for 7 days with CertiPUR-buffer) **DO sensors are light-sensitive; please protect them from direct light!**

DO calibration

Calibration	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (nitrogen, sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	BioLector CX_020305 (BL004)
Calibration phase offset	DO 332.2 (DO Ser.4020-hc, gain 55)
Date of calibration	2013/09/25

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Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	33113329
Date of sterilization	2013/09/18

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