Product Information

95293 Hydrogen ionophore I – Cocktail B

(H⁺-selective membrane solution for microelectrodes)
Selectophore®

Electrochemical Transduction

Microelectrodes

Application 1 and Sensor Type[1-16]
Assay of H^+ activity in extra- and intracellular (single-cell) liquids with H^+ microelectrodes based on Hydrogen ionophore I. This cocktail does not need to be equilibrated with CO_2.

Hydrogen ionophore I - -Cocktail B (95293)

Cocktail Composition

10.00 wt%	Hydrogen ionophore I (95292)
0.70 wt%	Sodium tetra(4-chlorophenyl)borate (60591)
89.30 wt%	2-Nitrophenyl octyl ether (73732)

equilibration with carbon dioxide

Recommended Cell Assembly

Reference || sample solution || cocktail | buffer solution, pH 7 | AgCl, Ag

Electrode Characteristics and Function

Selectivity coefficients $\log K_{H,M}^{Pot}$ as obtained by the fixed interference solution method on pH-buffered solutions.

$\log K_{H,Li}^{Pot}$	-10.8	$\log K_{H,K}^{Pot}$	-9.8
$\log K_{H,Na}^{Pot}$	-10.4	$\log K_{H,Ca}^{Pot}$	<-11.1

Slope of linear regression:	58.0±0.4 mV/dec (pH 5.5-12.0)
Practical pH measuring range (pH buffered solutions, ion background of 69 mM Na^+, 11.4 mM borate, 10 mM phosphate, 6.7 mM citrate):	5.5-12.0
Electrical resistance, tip diameter ~1 µm	~10^{11} Ω
Response time:	90% response time: ≤5 s

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