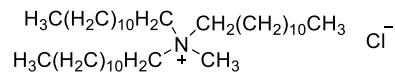


# Product Information



## 91661 Tridodecylmethylammonium chloride

(Methyltridodecylammonium chloride)

Selectophore®, function tested

### Electrochemical Transduction Ion-selective Electrodes

#### Application 1 and Sensor Type<sup>1</sup>

Assay of Cl<sup>-</sup> activity with solvent polymeric membrane electrode based on Tridodecylmethylammonium chloride with improved performance.

#### Recommended Membrane Composition

16.70 wt% Tridodecylmethylammonium chloride ([91661](#))

41.70 wt% Dipentyl phthalate ([80154](#))

8.30 wt% Dodecylbenzenesulfonic acid ([44199](#))

33.30 wt% Poly(vinyl chloride) high molecular weight ([81392](#))

#### Recommended Cell Assembly

Reference (e.g. Ag, AgCl, 0.0033 M KCl) | 0.0001 M KNO<sub>3</sub> || sample solution || liquid membrane | 0.003 M KCl | AgCl, Ag

#### Electrode Characteristics and Function

Selectivity coefficients log  $K_{Cl,X}^{Pot}$ .

$\log K_{Cl,HCO_3}^{Pot}$	-1.70	$\log K_{Cl,SO_4}^{Pot}$	-1.62
$\log K_{Cl,HPO_4}^{Pot}$	-1.08	$\log K_{Cl,OAc}^{Pot}$	<-1.35

Slope of linear regression: -52 mV/dec (10<sup>-2</sup> to 5·10<sup>-4</sup> M Cl<sup>-</sup>)



## **Ion-selective Field Effect Electrodes**

### **Application 1 and Sensor Type<sup>2,3</sup>**

Determination of chloride with a chloride selective field-effect transistor (ISFET). The gate membrane is based on an "Urushi" matrix with good durability.

### **Recommended Membrane Composition**

50.00 wt% Tridodecylmethylammonium chloride ([91661](#))  
50.00 wt% Urushi latex

### **Electrode Characteristics**

Selectivity coefficients  $\log K_{Cl,X}^{Pot}$ :

$\log K_{Cl,HCO_3}^{Pot}$	-1.6	$\log K_{Cl,Br}^{Pot}$	-0.2
$\log K_{Cl,HPO_4}^{Pot}$	-1.6	$\log K_{Cl,SCN}^{Pot}$	2.2
$\log K_{Cl,SO_4}^{Pot}$	-1.2		

Slope of linear regression: -51 mV/dec (10<sup>-4</sup> to 1 M Cl<sup>-</sup>)

<sup>1</sup> Incorporation of dodecylbenzenesulfonic acid in a poly(vinyl chloride) matrix chloride ion-selective membrane based on tertiary ammonium. S. Nomura, Analyst 120, 503 (1995).

<sup>2</sup> Urushi matrix sodium, potassium, calcium and chloride-selective field- effect transistors. S. Wakida, M. Yamane, K. Higashi, K., Hiroyo, Y. Ujihira, Sensors and Actuators B1, 412 (1990).

<sup>3</sup> A novel Urushi matrix chloride ion-selective field effect transistor. S. Wakida, M. Yamane, K. Hiroyo, Talanta 35, 326 (1988).



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