

### Electrodes, ion selective, Thermo Scientific Orion®



**Thermo**  
SCIENTIFIC



- Can be used in coloured or turbid samples
- Indirect techniques allow different ions to be sensed, e.g., sulphate with a lead electrode
- Backed by a wide bibliography of methods
- SureFlow® reference system and Ionplus® technology

Measurements using an ion selective electrode (ISE) are applicable in virtually every laboratory. ISEs can be used to measure ion concentrations in water, food, pharmaceuticals and biological samples. ISEs are a great analytical tool and are ideal for use with the Thermo Scientific Star® A series meters. All Thermo Scientific Orion® electrodes come with a 1m cable and BNC connector and are 120mm in length x 12mm in diameter.

|   | Catalogue No | Legacy No | Alt. No    | Description                      | Type                          | Measurement range   |
|---|--------------|-----------|------------|----------------------------------|-------------------------------|---|
| 1 | 10659663     | -         | 9512HPBNWP | High performance ammonia ISE     | Gas sensing, combination      | $5 \times 10^{-7}M$ to 1.0M, 0.01ppm to 17,000ppm   |
|   | 10314721     | -         | 9635BNWP   | Bromide(Br)                      | Solid state, combination      | $5 \times 10^{-6}M$ to 1.0M, 0.40ppm to 79,900ppm   |
|   | 10489102     | -         | 9648BNWP   | Cadmium( $Cd^{2+}$ )             | Solid state, combination      | $1 \times 10^{-7}M$ to 0.1M, 0.01ppm to 11,200ppm   |
|   | 10449682     | -         | 9720BNWP   | Calcium ( $Ca^{2+}$ )            | Plastic membrane, combination | $5 \times 10^{-7}M$ to 1.0M, 0.02ppm to 40,100ppm   |
|   | 10089100     | -         | 9502BNWP   | Carbon Dioxide ( $CO_2$ )        | Gas sensing, combination      | $1 \times 10^{-4}M$ to $1 \times 10^{-2}M$ , 4.4ppm to 440ppm                               |
|   | 10599511     | -         | 9617BNWP   | Chloride( $Cl^-$ )               | Solid state, combination      | $5 \times 10^{-6}M$ to 1.0M, 1.8ppm to 35,500ppm  |
|   | 10049150     | -         | 9629BNWP   | Cupric( $Cu^{2+}$ )              | Solid state, combination      | $1 \times 10^{-6}M$ to 0.1M, $6.4 \times 10^{-4}ppm$ to 6,350ppm                            |
| 2 | 10549131     | -         | 9606BNWP   | Cyanide (CN)                     | Solid state, combination      | $8 \times 10^{-6}M$ to $1 \times 10^{-2}M$ , 0.2ppm to 260ppm                               |
| 3 | 10374141     | -         | 9609BNWP   | Fluoride combination ISE         | Solid state, combination      | $1 \times 10^{-6}M$ to saturated, 0.02ppm to saturated                                      |
|   | 10191351     | -         | 9653BNWP   | Iodide(I <sup>-</sup> )          | Solid state, combination      | $5 \times 10^{-6}M$ to 1.0M, $5 \times 10^{-3}ppm$ to 127,000ppm                            |
|   | 10587401     | -         | 9682BNWP   | Lead ( $Pb^{2+}$ )               | Solid state, combination      | $1 \times 10^{-6}M$ to 0.1M, 0.2ppm to 20,700ppm  |
|   | 10597401     | -         | 9707BNWP   | Nitrate( $NO_3^-$ )              | Plastic membrane, combination | $7 \times 10^{-6}M$ to 1.0M, 0.1 ppm to 14,000ppm as N                                      |
|   | 10757352     | -         | 9719BNWP   | Potassium( $K^+$ )               | Plastic membrane, combination | $1 \times 10^{-6}M$ to 1.0M, 0.04ppm to 39,000ppm   |
| 4 | 10448912     | -         | 9770BNWP   | Residual chlorine ( $Cl_2$ )     | Solid state, combination      | $1 \times 10^{-7}M$ to $3 \times 10^{-4}M$ , 0.01ppm to 20ppm                               |
|   | 10374521     | -         | 9616BNWP   | Silver/Sulphide( $Ag^+/S^{2-}$ ) | Solid state, combination      | $1 \times 10^{-7}M$ to 1.0M, 0.01ppm to 107,900ppm as Ag, 0.003ppm to 32,100ppm as $S^{2-}$ |
|   | 10384141     | -         | 8611BNWP   | Sodium combination ISE           | Glass, combination            | $1 \times 10^{-6}M$ to saturated, 0.02ppm to saturated                                      |

### Electrode cleaning and storage solutions

Reagecon

#### Electrode cleaning solutions

| Catalogue No | Legacy No | Description  |
|--------------|-----------|--|
| 11593172     | -         | Electrode cleaning solution (pepsin/hydrochloric acid) for removal of proteins, 500mL            |
| 11503182     | -         | Inorganic electrode cleaning solution (thiourea/hydrochloric acid) for removal of sulfide, 500mL |
| 11513182     | -         | Organic electrode cleaning solution, 500mL   |
| 11523182     | -         | Electrode regeneration solution, 100mL   |

#### Electrode storage solutions

| Catalogue No | Legacy No | Description                          |
|--------------|-----------|--------------------------------------|
| 11533182     | -         | pH electrode storage solution, 500mL |
| 12890327     | -         | pH electrode storage solution, 1L    |

### Electrode stand

HANNA  
instruments

Cantilever stand with a large steel, enamel coated base, holds up to three electrodes or temperature probes in any position.

| Catalogue No | Legacy No | Alt. No  |
|--------------|-----------|----------|
| 10390741     | -         | HI-76405 |

