

# Test Solutions for Drilling Fluid Testing

## Price List

**April 2005**

(Prices will be valid until 31<sup>st</sup> March 2006)



**To Order:**

**By Post to:** Refer Scientific, Hareburn Terrace, Blackdog, Aberdeen, UK, AB23 8BE

**By Telephone:** (+44) 1224 825394

**By Fax:** (+44) 1224 706324

**By Email:** [sales@referscientific.co.uk](mailto:sales@referscientific.co.uk)




**For MSDS's visit:** [www.referscientific.co.uk](http://www.referscientific.co.uk)


Tel: +44 1224 825394

Email: [sales@referscientific.co.uk](mailto:sales@referscientific.co.uk)

All prices in £'s (vat extra @ 17.5%)




April 2005




		<b>Stock Code</b>	<b>Pack</b>	<b>£</b>
<b>AMMONIA BUFFER</b> (Total Hardness Buffer) (Versenate Hardness Buffer) (NH <sub>4</sub> OH) Corrosive Class 8 UN No. 2672		T/01101.121	60ml	3.50
		T/01101.232	250ml	6.10
		T/01101.565	500ml	11.20
		T/01101.701	1lt	17.90
		T/01101.850	2.5lt	42.60
<b>BARIUM CHLORIDE</b> <b>10% Solution</b> (BaCl <sub>2</sub> ) Toxic Class 6.1 UN No. 3287		T/02166.121	60ml	6.50
		T/02166.232	250ml	11.20
		T/02166.565	500ml	18.20
		T/02166.701	1lt	21.10
		T/02166.850	2.5lt	30.70
<b>BORIC ACID 2% Solution</b>		T/02198.232	250ml	8.50
		T/02198.565	500ml	13.70
		T/02198.701	1lt	25.20
<b>BROMINE WATER (2.5%)</b> Corrosive Class 8 UN No. 1744		T/02202.232	250ml	9.30
		T/02202.565	500ml	16.90
		T/02202.701	1lt	20.10
		T/02202.850	2.5lt	27.90
<b>BROMOCRESOL GREEN</b> <b>Indicator</b>		T/02210.121	60ml	4.10
		T/02210.232	250ml	10.10
		T/02210.565	500ml	18.20
		T/02210.701	1lt	30.00
		T/02210.850	2.5lt	71.20
		T/02210.900	5Lt	113.20
<b>BROMOCRESOL GREEN/                      METHYL RED Indicator</b>		T/02215.121	60ml	4.70
		T/02215.232	250ml	11.20
		T/02215.565	500ml	17.30
<b>BROMOPHENOL BLUE Indicator</b> (Potassium Indicator Solution)		T/02375.121	60ml	4.40
		T/02375.232	250ml	11.20
		T/02375.565	500ml	19.70
<b>BROMOTHYMOL BLUE Indicator</b>		T/02450.121	60ml	5.20
<b>CALCIUM BROMIDE BRINE</b>		T/03210.701	1lt	13.40
		T/03210.850	2.5lt	33.40
		T/03210.900	5Lt	44.00
<b>CALMAGITE Solution</b> (Calcium Indicator)		T/03117.121	60ml	8.00
		T/03117.232	250ml	9.60
		T/03117.565	500ml	11.90
		T/03117.701	1lt	21.10
		T/03117.850	2.5lt	48.80
		T/03117.900	5Lt	66.60
<b>CALVER II Powder</b>		T/03144.444	10g	13.00
		T/03144.655	100g	30.70





	Stock Code	Pack	£
<b>CITRIC ACID 2.0 Molar Solution</b>	T/03190.121	60ml	4.40
	T/03190.232	250ml	11.40
	T/03190.565	500ml	22.50
	T/03190.701	1lt	44.50
<b>CRESOL RED Indicator</b>	T/03406.121	60ml	8.00
	T/03406.232	250ml	14.50
	T/03406.565	500ml	25.80
	T/03406.701	1lt	45.90
	T/03406.850	2.5lt	88.80
<b>EDTA 0.001M Solution</b> (Hardness Titrating Solution 2EPM)	T/05090.121	60ml	4.10
	T/05090.232	250ml	6.10
	T/05090.565	500ml	9.30
	T/05090.701	1lt	12.50
	T/05090.850	2.5lt	29.00
	T/05090.900	5Lt	55.00
<b>EDTA 0.01M Solution</b> (Hardness Titrating Solution 20EPM)	T/05160.121	60ml	4.10
	T/05160.232	250ml	6.10
	T/05160.565	500ml	9.30
	T/05160.701	1lt	12.50
	T/05160.850	2.5lt	29.00
	T/05160.900	5Lt	55.00
<b>EDTA 0.1M Solution</b> (Hardness Titrating Solution 200EPM)	T/05295.121	60ml	4.70
	T/05295.232	250ml	10.10
	T/05295.565	500ml	14.50
	T/05295.701	1lt	19.70
	T/05295.850	2.5lt	52.00
	T/05295.900	5Lt	75.90
<b>EXOSOL (Xylene/I.P.A. 50:50)</b> Flammable Class 3 UN No. 1993	T/05500.701	1lt	14.50
	T/05500.850	2.5lt	16.10
	T/05500.900	5lt	22.90
	T/05500.950	25lt	78.00
			
<b>HYDROCHLORIC ACID 0.02N</b> (HCl)	T/08702.121	60ml	3.50
	T/08702.232	250ml	5.40
	T/08702.565	500ml	7.50
	T/08702.701	1lt	8.50
	T/08702.850	2.5lt	12.70
	T/08702.900	5Lt	23.80
<b>HYDROCHLORIC ACID 0.1N</b> (HCl)	T/08704.121	60ml	3.50
	T/08704.232	250ml	5.40
	T/08704.565	500ml	7.50
	T/08704.701	1lt	8.50
	T/08704.850	2.5Lt	12.70
	T/08704.900	5Lt	33.40
<b>HYDROCHLORIC ACID 0.2N</b> (HCl)	T/08739.121	60ml	3.50
	T/08739.232	250ml	5.40
	T/08739.565	500ml	7.50
	T/08739.701	1lt	8.50
	T/08739.850	2.5lt	12.70

	Stock Code	Pack	£
<b>HYDROCHLORIC ACID 1.0N</b> (HCl) UN No. 1789	T/08740.232	250ml	13.00
	T/08740.565	500ml	14.10
	T/08740.701	1lt	26.20
	T/08740.850	2.5Lt	42.60
<b>HYDROCHLORIC ACID 2.0N</b> (HCl) UN No. 1789	T/08742.232	250ml	13.00
	T/08742.565	500ml	20.60
	T/08742.701	1lt	27.40
	T/08742.850	2.5lt	62.60
<b>HYDROCHLORIC ACID 15%</b> (HCl) Irritant UN No. 1789	T/08745.121	60ml	5.20
	T/08745.232	250ml	9.30
	T/08745.565	500ml	12.70
<b>HYDROGEN PEROXIDE 3%</b> (H <sub>2</sub> O <sub>2</sub> )	T/08822.121	60ml	3.90
	T/08822.232	250ml	4.90
	T/08822.565	500ml	7.00
	T/08822.701	1lt	10.10
	T/08822.850	2.5lt	15.40
	T/08822.900	5Lt	29.10
<b>HYDROGEN PEROXIDE 6%</b>	T/08861.121	60ml	4.10
	T/08861.232	250ml	6.10
	T/08861.565	500ml	8.00
	T/08861.701	1lt	11.90
	T/08861.850	2.5lt	22.30
<b>MANVER Indicator</b> (Versenate Hardness Indicator) (Calver Indicator Solution)	T/13187.121	60ml	7.00
	T/13187.232	250ml	11.70
	T/13187.565	500ml	22.30
	T/13187.701	1lt	38.00
	T/13187.850	2.5lt	93.80
<b>METHYL ORANGE Indicator</b>	T/13309.121	60ml	4.40
	T/13309.232	250ml	10.70
	T/13309.565	500ml	18.70
	T/13309.701	1lt	32.40
	T/13309.850	2.5lt	73.10
<b>METHYL ORANGE / BROMOCRESOL GREEN Indicator</b>	T/13328.121	60ml	4.10
	T/13328.232	250ml	11.20
<b>METHYL RED Indicator</b> Flammable Class 3 UN No. 1993	T/13375.121	60ml	11.20
	T/13375.232	250ml	14.10
	T/13375.565	500ml	18.50
	T/13375.701	1lt	31.20
<b>METHYLENE BLUE Indicator</b>	T/13401.121	60ml	4.40
	T/13401.232	250ml	8.50
	T/13401.565	500ml	15.40
	T/13401.701	1lt	24.70
	T/13401.850	2.5lt	51.50
	T/13401.900	5Lt	66.60



	Stock Code	Pack	£
<b>NITRIC ACID 1.0N</b> (HNO <sub>3</sub> ) Corrosive Class 8 UN No. 2031 	T/14190.232	250ml	7.00
	T/14190.850	2.5lt	30.70
<b>PHENOLPHTHALEIN Solution</b> Flammable Class 3 UN No. 1993 	T/16200.121	60ml	4.10
	T/16200.232	250ml	9.60
	T/16200.565	500ml	10.50
	T/16200.701	1lt	20.60
	T/16200.850	2.5lt	40.70
	T/16200.900	5Lt	56.70
<b>POTASSIUM CHLORIDE STANDARD SOLUTION 20 lb/barrel</b>	T/16020.232	250ml	6.50
	T/16020.565	500ml	11.50
<b>POTASSIUM CHLORIDE STANDARD SOLUTION 40lb/barrel</b>	T/16040.232	250ml	6.50
	T/16040.565	500ml	11.50
<b>POTASSIUM CHLORIDE STANDARD SOLUTION 60lb/barrel</b>	T/16060.232	250ml	6.50
	T/16060.565	500ml	11.50
<b>POTASSIUM CHLORIDE STANDARD SOLUTION 80lb/barrel</b>	T/16080.232	250ml	6.50
	T/16080.565	500ml	11.50
<b>POTASSIUM CHLORIDE</b> Standard Solution (KCL)	T/16250.121	60ml	5.80
	T/16250.232	250ml	13.20
	T/16250.565	500ml	20.40
	T/16250.701	1lt	37.00
<b>POTASSIUM CHROMATE 5% Solution</b>	T/16311.121	60ml	4.40
	T/16311.232	250ml	11.90
	T/16311.565	500ml	20.10
	T/16311.701	1lt	34.30
	T/16311.850	2.5lt	78.00
	T/16311.900	5Lt	106.50
<b>POTASSIUM HYDROXIDE 8.0N</b> (KOH) Corrosive Class 8 UN No. 1814 	T/16450.121	60ml	6.50
	T/16450.232	250ml	11.70
	T/16450.565	500ml	16.10
	T/16450.701	1lt	31.50
	T/16450.850	2.5lt	62.40
<b>pH BUFFER SOLUTION 4.0pH</b>	T/16704.121	60ml	5.40
	T/16704.232	250ml	10.10
	T/16704.565	500ml	14.10
	T/16704.701	1lt	16.70
	T/16704.850	2.5lt	34.30
<b>pH BUFFER SOLUTION 7.0pH</b>	T/16707.121	60ml	5.40
	T/16707.232	250ml	10.10
	T/16707.565	500ml	14.10
	T/16707.701	1lt	16.70
	T/16707.850	2.5lt	34.30

	Stock Code	Pack	£
<b>pH BUFFER SOLUTION 10.0pH</b>	T/16710.121	60ml	5.40
	T/16710.232	250ml	10.10
	T/16710.565	500ml	14.10
	T/16710.701	1lt	16.70
	T/16710.850	2.5lt	34.30
<b>ETHOXY-BUTOXY PROPANAL</b> Flammable Class 3 UN No. 1993			
	T/18001.701	1lt	24.00
	T/18001.900	5lt	44.60
	T/18001.950	25lt	147.00
<b>SILVER NITRATE 0.0282N Solution</b> (AgNO <sub>3</sub> ) (1ml = 0.001g Cl)	T/19140.121	60ml	5.40
	T/19140.232	250ml	9.00
	T/19140.565	500ml	13.00
	T/19140.701	1lt	21.10
	T/19140.850	2.5lt	42.00
<b>SILVER NITRATE 0.282N Solution</b> (AgNO <sub>3</sub> ) (1ml = 0.01g Cl)	T/19190.121	60ml	12.50
	T/19190.232	250ml	29.60
	T/19190.565	500ml	55.60
	T/19190.701	1lt	105.50
	T/19190.850	2.5lt	246.10
<b>SILVER NITRATE 0.1N Solution</b>	T/19220.121	60ml	6.50
	T/19220.232	250ml	11.70
	T/19220.565	500ml	19.40
	T/19220.701	1lt	30.00
	T/19220.850	2.5lt	60.40
<b>SODIUM FLUORIDE (Vials)</b>	T/19300.015	1.5g	2.00
<b>SODIUM HYDROXIDE 0.1N (NaOH)</b>	T/19315.121	60ml	4.10
	T/19315.232	250ml	6.50
	T/19315.565	500ml	8.50
	T/19315.701	1lt	10.30
	T/19315.850	2.5lt	17.30
	T/19315.900	5Lt	23.60
<b>SODIUM HYDROXIDE 0.2N</b>	T/19333.121	60ml	4.10
	T/19333.232	250ml	6.50
	T/19333.565	500ml	8.50
	T/19333.701	1lt	10.30
	T/19333.850	2.5lt	17.30
<b>SODIUM HYDROXIDE 1.0N</b> (Calver/Calcium Buffer) Corrosive Class 8 UN No. 1824			
	T/19410.121	60ml	4.10
	T/19410.232	250ml	6.50
	T/19410.565	500ml	8.50
	T/19410.701	1lt	10.30
	T/19410.850	2.5lt	17.30
	T-19410.900	5Lt	23.60
<b>SODIUM HYDROXIDE 5.0N</b> Corrosive Class 8 UN No. 1824			
	T/19466.121	60ml	4.40
	T/19466.232	250ml	10.70
	T/19466.565	500ml	12.70
	T/19466.701	1lt	16.10
	T/19466.850	2.5lt	22.90
	T/19466.900	5Lt	36.90

	Stock Code	Pack	£
<b>SODIUM PERCHLORATE Solution</b> Oxidising Class 5.1 UN No. 3211 	T/19660.121	60ml	8.50
	T/19660.232	250ml	27.20
	T/19660.565	500ml	52.60
	T/19660.701	1lt	98.90
	T/19660.850	2.5lt	198.20
<b>SODIUM TETRAPHENYLBORON Solution</b>	T/19695.232	250ml	16.70
	T/19695.701	1lt	54.90
<b>STANNIC CHLORIDE Solution</b> (Floc Developer 'S') Corrosive Class 8 UN No. 1760 	T/19730.121	60ml	6.50
	T/19730.232	250ml	12.50
	T/19730.565	500ml	20.10
	T/19730.701	1lt	35.80
	T/19730.850	2.5lt	77.30
<b>STARCH Indicator</b>	T/19815.121	60ml	4.40
	T/19815.232	250ml	7.00
	T/19815.565	500ml	12.70
	T/19815.701	1lt	18.20
	T/19815.850	2.5lt	43.40
T/19815.900	5Lt	65.10	
<b>SULPHURIC ACID 0.01N</b> (H <sub>2</sub> SO <sub>4</sub> )	T/19872.232	250ml	4.10
	T/19872.565	500ml	5.40
	T/19872.701	1lt	7.50
	T/19872.850	2.5Lt	16.70
	T/19872.900	5Lt	21.10
<b>SULPHURIC ACID 0.02N</b>	T/19895.121	60ml	4.10
	T/19895.232	250ml	5.40
	T/19895.565	500ml	7.50
	T/19895.701	1lt	8.50
	T/19895.850	2.5lt	16.70
T/19895.900	5Lt	21.10	
<b>SULPHURIC ACID 0.1N</b>	T/19902.121	60ml	4.10
	T/19902.232	250ml	5.40
	T/19902.565	500ml	7.50
	T/19902.701	1lt	8.50
	T/19902.850	2.5lt	16.70
T/19902.900	5Lt	21.10	
<b>SULPHURIC ACID 5.0N</b> Corrosive Class 8 UN No. 2796 	T/19910.121	60ml	4.10
	T/19910.232	250ml	7.00
	T/19910.565	500ml	9.60
	T/19910.701	1lt	17.30
	T/19910.850	2.5lt	32.70
T/19910.900	5Lt	53.30	
<b>THYMOLPHTHALEIN Indicator</b> Flammable Class 3 UN No. 1993 	T/20200.121	60ml	4.40
	T/20200.232	250ml	11.90
	T/20200.565	500ml	21.60

	Stock Code	Pack	£
<b>DISTILLED WATER</b>	T/23400.232	250ml	4.10
	T/23400.565	500ml	4.70
	T/23400.701	1lt	6.50
	T/23400.850	2.5lt	8.00
	T/23400.900	5lt	10.10
	T/23400.950	25lt	24.90
<b>SEA SALT SOLUTION</b>	T/24010.001	25lt	84.50

#### TEST SOLUTION KITS

Various standard kits can be supplied as listed on the following pages. We can also tailor kits to your specifications. These kits are generally supplied loose or packed suitable for transport by sea or air.

Due to the hazardous nature of some of the chemicals it is not possible to simply put all the necessary solutions in one large case and supply it as "a kit", if the kit is to be shipped offshore or overseas.

All our chemicals can be packed for transport by sea or air, by fully qualified and trained staff. Please ask for details.

#### KIT A (Standard 30 day)

**T/27000.001**

Test Solution	Excluding packaging	£
Ammonia Buffer	2 x 60ml	
RS21	2 x 5Lt	
Calver II	3 x 10g	
E.D.T.A. 0.01M	2 x 250ml	
E.D.T.A. 0.1M	2 x 250ml	
Hydrogen Peroxide 3%	4 x 250ml	
Manver Indicator	2 x 60ml	
Methylene Blue	3 x 250ml	
Methyl Orange	2 x 60ml	
Phenolphthalein	2 x 60ml	
Potassium Chromate 5%	2 x 60ml	
Silver Nitrate 0.0282N	2 x 250ml	
Silver Nitrate 0.282N	2 x 250ml	
Sodium Hydroxide 0.1N	2 x 250ml	
Sodium Hydroxide 1.0N	3 x 60ml	
Sulphuric Acid 0.02N	2 x 250ml	
Sulphuric Acid 0.1N	2 x 250ml	
Sulphuric Acid 5.0N	1 x 250ml	
	Excluding packaging	£ 380.40
	Incl packaging & documentation for sea freight	£ 447.00
	Incl packaging & documentation for air freight	£ 465.10

#### KIT B - Water Based Mud (Standard 30 day)

**T/27005.001**

Test Solution	Excluding packaging	£
Ammonia Buffer	2 x 60ml	
Bromocresol Green	2 x 60ml	
Calver II	1 x Pk/100 Pillows	
Defoamer	1 x 60ml	
Distilled Water	1 x 25Lt	
E.D.T.A. 0.01M	2 x 250ml	
Gas Cartridges - CO2	15 x Pk/10	
Hydrogen Peroxide 3%	2 x 250ml	
Manver Indicator	2 x 60ml	
Methylene Blue	2 x 250ml	
Methyl Orange	1 x 60ml	
pH Buffer 4.0pH	1 x 250ml	
pH Buffer 7.0pH	1 x 250ml	
pH Buffer 10.0pH	1 x 250ml	
Phenolphthalein	2 x 60ml	
Potassium Chromate 5%	2 x 60ml	
Potassium Chloride Std Sol.	1 x 250ml	
Potassium Hydroxide 8.0N	2 x 60ml	
Silver Nitrate 0.0282N	2 x 250ml	
Silver Nitrate 0.282N	2 x 250ml	
Sodium Hydroxide 0.1N	2 x 250ml	
Sodium Hydroxide 1.0N	1 x 250ml	
Sodium Perchlorate Solution	1 x 250ml	
Sulphuric Acid 0.02N	1 x 250ml	
Sulphuric Acid 5.0N	4 x 60ml	
	Excluding packaging	£ 394.20
	Incl packaging & documentation for sea freight	£ 484.90

**KIT C - Oil Based Mud (Standard 30 day)**
**T/27006.001**
**Test Solution**

Ammonia Buffer	2 x 60ml
Aktaflo E	1 x 250ml
Calver II	1 x Pk/100 Pillows
Defoamer	1 x 60ml
Distilled Water	1 x 25Lt
E.D.T.A. 0.01M	2 x 250ml
Exosol	4 x 1Lt
Gas Cartridges - CO2	15 x Pk/10
Gas Cartridges - N2O	5 x Pk/10
Manver Indicator	2 x 60ml
Phenolphthalein	2 x 60ml
Potassium Chromate 5%	2 x 60ml
Potassium Hydroxide 8.0N	2 x 60ml
Silver Nitrate 0.0282N	2 x 250ml
Silver Nitrate 0.282N	2 x 250ml
Sodium Hydroxide 0.1N	2 x 250ml
Sulphuric Acid 0.02N	1 x 250ml
Sulphuric Acid 0.1N	2 x 250ml

Excluding packaging £ 351.40

 Incl packaging & documentation  
for sea freight £ 417.90

**KIT D - Combination Mud Kit (Standard 30 day)**
**T/27007.001**
**Test Solution**

Ammonia Buffer	2 x 60ml
Bromocresol Green	2 x 60ml
Calver II	1 x Pk/100 Pillows
Defoamer	1 x 60ml
Distilled Water	1 x 25Lt
E.D.T.A. 0.01M	2 x 250ml
Exosol	1 x 25Lt
Gas Cartridges - CO2	15 x Pk/10
Hydrogen Peroxide 3%	2 x 250ml
Manver Indicator	2 x 60ml
Methylene Blue	2 x 250ml
Methyl Orange	1 x 60ml
pH Buffer 4.0pH	1 x 250ml
pH Buffer 7.0pH	1 x 250ml
pH Buffer 10.0pH	1 x 250ml
Phenolphthalein	2 x 60ml
Potassium Chromate 5%	2 x 60ml
Potassium Chloride Std Sol.	1 x 250ml
Potassium Hydroxide 8.0N	2 x 60ml
Silver Nitrate 0.0282N	2 x 250ml
Silver Nitrate 0.282N	2 x 250ml
Sodium Hydroxide 0.1N	2 x 250ml
Sodium Hydroxide 1.0N	1 x 250ml
Sodium Perchlorate Solution	1 x 250ml
Sulphuric Acid 0.02N	1 x 250ml
Sulphuric Acid 0.1N	2 x 250ml
Sulphuric Acid 5.0N	4 x 60ml

Excluding packaging £ 482.80

 Incl packaging & documentation  
for sea freight £ 573.60