


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>EffectTech</h3> <p>Issue No: 015      Issue date: 23 June 2007</p>	
	<p>Dove House Dove Fields Uttoxeter Staffordshire ST14 8HU</p>	<p>Contact: Dr Gavin Squire Tel: +44 (0)1889 569229 Fax: +44 (0)1889 569220 E-Mail: gavin.squire@effectech.co.uk Website: www.effectech.co.uk</p>

Testing performed by the Organisation at the locations specified below

#### Locations covered by the organisation and their relevant activities

#### Laboratory locations:

Location details	Activity	Location code
<p><b>Address</b> Dove House Dove Fields Uttoxeter Staffordshire ST14 8HU</p> <p><b>Local contact</b> Dr Gavin Squire  Tel: +44 (0)1889 569229 Fax: +44 (0)1889 569220 Email: gavin.squire@effectech.co.uk</p>	Gas Testing	Uttoxeter
<p><b>Address</b> Plot No T-112 MIDC Tarapur Boisar District Thane 401506 India</p> <p><b>Local contact</b> Padmakar Tillu  Tel: +91 9867 678735 Fax: +91 2525 270660 Email: padmakar.tillu@effectech.co.in</p>	Gas Testing	Tarapur





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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code																																																								
NATURAL GAS (cont'd)	<p><u>Chemical Analysis</u></p> <p>amount fraction (%mol/mol)</p> <table border="0"> <tr><td>nitrogen</td><td>0.1 to 12</td></tr> <tr><td>carbon dioxide</td><td>0.05 to 8</td></tr> <tr><td>methane</td><td>64 to 100</td></tr> <tr><td>ethane</td><td>0.1 to 14</td></tr> <tr><td>propane</td><td>0.05 to 8</td></tr> <tr><td>iso-butane</td><td>0.01 to 1.2</td></tr> <tr><td>n-butane</td><td>0.01 to 1.2</td></tr> <tr><td>neo-pentane</td><td>0.005 to 0.35</td></tr> <tr><td>iso-pentane</td><td>0.005 to 0.35</td></tr> <tr><td>n-pentane</td><td>0.005 to 0.35</td></tr> <tr><td>2-methylpentane</td><td>0.005 to 0.10</td></tr> <tr><td>3-methylpentane</td><td>0.005 to 0.10</td></tr> <tr><td>2,2-dimethylbutane</td><td>0.005 to 0.10</td></tr> <tr><td>n-hexane</td><td>0.005 to 0.10</td></tr> <tr><td>hexanes [2]</td><td>0.005 to 0.10</td></tr> <tr><td>benzene</td><td>0.005 to 0.10</td></tr> <tr><td>cyclohexane</td><td>0.005 to 0.10</td></tr> <tr><td>n-heptane</td><td>0.0025 to 0.10</td></tr> <tr><td>heptanes [2]</td><td>0.0025 to 0.10</td></tr> <tr><td>toluene</td><td>0.005 to 0.10</td></tr> <tr><td>methylcyclohexane</td><td>0.005 to 0.10</td></tr> <tr><td>n-octane</td><td>0.0005 to 0.05</td></tr> <tr><td>octanes [2]</td><td>0.0005 to 0.05</td></tr> <tr><td>n-nonane</td><td>0.0005 to 0.02</td></tr> <tr><td>nonanes [2]</td><td>0.0005 to 0.02</td></tr> <tr><td>n-decane</td><td>0.0005 to 0.005</td></tr> <tr><td>decanes [2]</td><td>0.0005 to 0.005</td></tr> <tr><td>oxygen</td><td>0.005 to 1.0</td></tr> </table>	nitrogen	0.1 to 12	carbon dioxide	0.05 to 8	methane	64 to 100	ethane	0.1 to 14	propane	0.05 to 8	iso-butane	0.01 to 1.2	n-butane	0.01 to 1.2	neo-pentane	0.005 to 0.35	iso-pentane	0.005 to 0.35	n-pentane	0.005 to 0.35	2-methylpentane	0.005 to 0.10	3-methylpentane	0.005 to 0.10	2,2-dimethylbutane	0.005 to 0.10	n-hexane	0.005 to 0.10	hexanes [2]	0.005 to 0.10	benzene	0.005 to 0.10	cyclohexane	0.005 to 0.10	n-heptane	0.0025 to 0.10	heptanes [2]	0.0025 to 0.10	toluene	0.005 to 0.10	methylcyclohexane	0.005 to 0.10	n-octane	0.0005 to 0.05	octanes [2]	0.0005 to 0.05	n-nonane	0.0005 to 0.02	nonanes [2]	0.0005 to 0.02	n-decane	0.0005 to 0.005	decanes [2]	0.0005 to 0.005	oxygen	0.005 to 1.0	<p>In-House Method TM 005 using gas chromatography</p> <p>[2] the amount fraction of a grouped component is the sum of all isomers in that group except for those identified separately</p>	Tarapur
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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
NATURAL GAS (cont'd)	<u>Chemical Analysis</u>  amount fraction (ppm mol/mol)  hydrogen sulphide 0.05 to 10 carbonyl sulphide 0.05 to 10 methanethiol 0.05 to 10 (methyl mercaptan) ethanethiol 0.05 to 10 (ethyl mercaptan) tert-butyl mercaptan 0.05 to 10 propanethiol 0.05 to 10 (n-propyl mercaptan) butanethiol 0.05 to 10 (n-butyl mercaptan) methylethanethiol 0.05 to 10 (iso-propyl mercaptan) dimethyl sulphide 0.05 to 10 methylethyl sulphide 0.05 to 10 diethyl sulphide 0.05 to 10	In-House Method TM002 using gas chromatography with sulphur chemiluminescence detection (SCD)	Uttoxeter
	<u>Calculated Values</u>  Calorific value (superior) Calorific value (inferior) Relative density Density Wobbe Index Mean molecular mass Compression factor		Calculated values according to ISO 6976:1995 (E) including amendment No 1, May 1998
PETROLEUM AND PETROLEUM PRODUCTS	<u>Chemical tests</u>  Density 0.68 g/ml to 0.97 g/ml  Water content 0.001 % to 5.0 % by mass  Condensate composition to nC <sub>26</sub>  Flash stabilisation to determine fluid composition to nC <sub>26</sub>	In-House Method TM008 IP365/84  In-House Method TM007 IP386/99  In-House Method TM009  In-House Method TM010	Uttoxeter
END			