


# 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>Edwards' Analytical</h3> <p><b>Issue No:</b> 011    <b>Issue date:</b> 30 November 2007</p>	
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<p><b>Testing performed at the above address only</b></p>		

### DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CERAMICS, METALS, POLYMERS	Tensile properties to 2.0kN and compression properties to 2.0 kNn	In-house documented procedure Various using BS, ISO and ASTM methods using AM/EA/03 and SOP/EA/005
	Coefficient of thermal linear expansion	SOP/EA/11 based on ASTM E381 using Thermal Mechanical Analysis
MISCELLANEOUS CHEMICALS, WATERS, LACQUERS AND COATINGS, SOLVENT MIXTURES	Identification and assay	AP/EA/07 in combination with SOP/EA/10 and 13 by Ultra-violet/Visible (UV-Vis) Spectroscopy
	Identification and assay	AP/EA/01 and 13 by Infra-Red Spectroscopy (FT-IR)
	Solids content and analysis of dissolved solids	AM/EA/073
	pH	AM/EA/073
	Acid/base content	AM/EA/071
	Reducing substances	AM/EA/072
	Analysis of organic solvents	AM/EA/056b and 59b
Water content of organic liquids	AM/EA/105 using GC/TCD	



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CHEMICAL SOLUTIONS ACID EXTRACTION OF POLYMERS & PACKAGING	Metals covering : Aluminium, Antimony, Barium, Cadmium, Calcium , Chromium Copper, Lead, Mercury, Sodium, Tin, Titanium, Vanadium, Zinc, Zirconium	SOP/EA/021, AM/EA/081 and AM/EA/100 using Atomic Absorption Spectroscopy (AAS)
MISCELLANEOUS MATERIALS	Linear & Angular Dimensional testing [0.1um to 2.5m and 0.1deg to 360 deg]	AM/EA/10 and SOP/EA/06 Using microscopy, Projection microscope, vernier gauges and travelling microscope
	Unit mass 0.1mg to 2.5kg	AP/EA/08 and SOP/EA/09b
	Weight loss with temperature increase	SOP/EA/24 using Thermal Gravimetric Analysis (TGA)
	Acquisition of Near Infra-Red Spectrum	SOP/EA/025 using Buchi FT_Near Infra red spectrometer
SUPPOSITORIES & PESARIS	Softening time and Resistance to rupture	BP/EP using AM/EA/112 and AM/EA/113
ATMOSPHERIC POLLUTANTS	Volatile Organic solvents	AM/EA/060 by GC
	Particle size distribution	Microscopy using AP/EA/11 and AM/EA/069
PLASTICS AND RUBBERS	Identification and assay	AP/EA/01 and AM/EA/005 and AM/EA/037 by FT-IR & FT-IR Microscopy
	Qualitative and quantitative analysis	SOP/EA/025 using FT-NIR
	Identification and assay	AP/EA/01 by Differential Scanning Calorimetry (DSC)
	Ash content and analysis of mineral fillers and pigments	AM/EA/075 using TGA & FT-IR
	Degree of oxidation	AM/EA/026 by FT- IR
	Onset of oxidation	AP/EA/01 by DSC
	Curing reactions	AP/EA/01 by DSC



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PLASTICS AND RUBBERS (cont'd)	Antioxidant additives	AM/EA/021 by High Performance Liquid Chromatography (HPLC) and Thin Layer Chromatograph (TLC)	
	Amide slip additives	AM/EA/022 by HPLC and TLC	
	Plasticisers	AM/EA/076 by IR and HPLC	
	Coefficient of thermal linear expansion and softening points and VICAT	SOP/EA/11 by Thermal Mechanical Analysis (TMA)	
	Shore A hardness	AM/EA/033 by TMA Shore A hardness	
	Tensile and compression properties 0.1 N to 2.5 kN	Various using BS, ISO and ASTM methods using AM/EA/03 and SOP/EA/005	
	Melt flow rate and melt volume rate	AM/EA/77	
	Density	AM/EA/066 and 67 by pycnometer and displacement	
	PACKAGING & PACKAGING MATERIALS, MISCELLANEOUS	Identification and assay	FT-IR and DSC AP/EA/001
		Measurement of gauges of multi-layered laminates, etc	AM/EA/001/002 002 & 037 and FT-IR/Microscopy
Tensile and compression properties		AP/EA/002 and 006 and AM/EA/004	
Internal bond strength		Using tensile tester AM/EA/019	
Tear strength		Trouser type test method using tensile tester AM/EA/018	
Evaluation of self adhesive labels		FINAT test methods AM/EA/09	
Seal strength		Using tensile tester AM/EA/109	
Sealability		Using laboratory heat sealer and tensile tester AM/EA/008	
Coefficient of friction	Kinematic and Dynamic AM/EA/027		



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PACKAGING & PACKAGING MATERIALS, MISCELLANEOUS (cont'd)	Analysis of headspace gasses Including O <sub>2</sub> , CO, CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> and Ar	AM/EA/061 and AM/EA/136 using Gas Chromatography (GC)
	Residual solvent analysis Including alcohols, ethers, ketones, esters, ether alcohols, and aliphatic and aromatic solvents	AM/EA/031 by headspace GC analysis
	Leak testing of packs and containers, integrity tests	ASTM D4991- AM/EA/135 and AM/EA/095 By dye injection AM/EA/032 By vacuum dye tests
	Silicone oil on rubber components	AM/EA/045c
	Silicone oil on glass syringes and dental cartridges for injection	AM/EA/044b
	Actuation forces of syringes and dental cartridges	AM/EA/046
	Water Vapour Permeation (water vapour transmission rates or moisture vapour transmission rates) of Films and Packs	Using MOCON Permatran W SOP/EA/18 and see pharmacopoeial tests
	Oxygen permeation rates (oxygen transmission rates) of Films and Packs	Using MOCON Oxtran 100 Twin SOP/EA/17
	Monitoring of weight changes of whole packs at various temperature/humidity environments	Using environmental chambers AM/EA/052
	PHARMACEUTICAL COMPLIANCE OF PACKAGING and PACKAGING COMPONENTS	United States Pharmacopoeia - latest edition
Containers Monograph <661>		
Glass - hydrolytic resistance		Crushed glass AM/EA/49 Surface resistance AM/EA/51
	Glass - Light transmission	UV/Vis spectroscopy AM/EA/13

