

LEAP 2012-2013年度污水，废水，污染土壤和危险废物检测能力验证计划

LEAP是Fapas[®]旗下水与环境检测的能力验证计划，由英国政府食品和乡村事务部(Defra)的执行机构英国食品与环境研究员(fera)组织。经UKAS (United Kingdom Accreditation Service)认可，由国际标准化组织向全球推荐(如ISO导则43)，该计划包含饮用水化学、微生物、寄生虫检测以及污水、废水和土壤的无机成分和重金属成分检测。Fapas从2007年开始与中国CNAS互认。已被全球食品链相关的分析实验室广泛采纳，与全球100多个国家的8000多家实验室保持密切的联系。现在中国已有超过300家实验室参加。

LEAP 污水，废水，污染土壤和危险废物检测能力验证计划：分析水中的无机物、有机物、金属残留以及土壤中的金属残留。

注意事项：

- 1、本年度 Leap 污水，废水，污染土壤和危险废物检测计划从 2012 年 4 月 1 日至 2013 年 3 月 31 日。
- 2、本计划所有的测试轮以样品派发时间为基准，其中 Group 1-8 至少提前 4 周报名，Group 9-34 至少提前 6 周报名。报名申请会在收到测试费用后正式生效。因此，为保证测试的顺利进行，请提前安排测试费用的支付。
- 3、报名申请成功后，若需取消，以本计划测试样品派发时间为基准，提前一个月以上的，将保留 50%的测试费用作为信用额度，只能用于下次报名的费用抵扣；若是在 1 个月内取消报名，仍须全额支付测试费用。
- 4、附录是《FAPAS/FEPAS/GeMMA/LEAP 水平测试申请表》，填写前请仔细阅读“注意事项”，我们收到申请表后将认为您已经了解并认可了 Fapas 能力验证的相关政策条款。
- 5、所有测试轮样品为 DHL 快递派送，正常情况样品将在 4 个工作日送达，快件的运单号将通过 Email 自动发送到您登记的邮箱，请注意查收并进行跟踪快件状态，如有问题，请及时联系当地 DHL 或我们。
- 6、Fapas (Fapas/Fepas/GeMMA/LEAP) 均不对样品在海关造成的延误、损失或损毁负责。
- 7、Leap 污水，废水，污染土壤和危险废物检测测试轮一般有 4 周的测试时间，具体“Close Date”请参阅《Instructions Letter》。
- 8、Leap 结果(报告)一般情况下将在测试轮结束后5周内给出，以Email通知为准。

计划表：

Distribution	EFF 31	EFF 32	EFF 33	EFF 34	EFF 35	EFF 36
Date	10/04/2012	15/06/2012	30/07/2012	05/10/2012	05/12/2012	28/01/2013
Group 1	R0121		R0122		R0123	R0124
Group 2	R0221		R0222		R0223	R0224
Group 3	R0321		R0322		R0323	R0324
Group 4	R0421		R0422		R0423	R0424
Group 5	R0521		R0522		R0523	R0524
Group 6	R0621		R0622		R0623	R0624
Group 7	R0721		R0722		R0723	R0724
Group 8	R0821		R0822		R0823	R0824
Group 9	R0911				R0912	
Group 10		R1011		R1012		
Group 11		R1111		R1112		
Group 12		R1211		R1212		
Group 13		R1311		R1312		
Group 14		R1411		R1412		
Group 15		R1511		R1512		
Group 16		R1611		R1612		
Group 17		R1711		R1712		
Group 18		R1811		R1812		
Group 19		R1911		R1912		
Group 20		R2011		R2012		
Group 21		R2111		R2112		
Group 22		R2211		R2212		
Group 23		R2311		R2312		
Group 24		R2407		R2408		
Group 25		R2507		R2508		
Group 26		R2605		R2606		
Group 27		R2705		R2706		
Group 28		R2805		R2806		
Group 29 discontinued						
Group 30		R3001		R3002		
Group 31		R3101		R3102		
Group 32		R3201		R3202		
Group 33		R3301		R3302		
Group 34		R3401		R3402		

The test materials supplied (except Group 9) are standard concentrates or standard solutions in ultra pure water. (除Group 9外，样品为超纯水中的标准浓缩液或标准溶液)

All Groups, except 4, 9, 13 & 16, require dilution with your laboratory's reagent water before analysis. Full instructions regarding this dilution step will be provided. (除了Group 4,9,13 & 16，样品为浓缩液，实验前需用实验室试剂水稀释。详见所提供的稀释步骤说明。)

When diluted the test materials will contain levels of contaminants usually, found in wastewater/ effluent samples. (所稀释的实验样本含有的污染物水平相当于废水/污水中的通常水平)

The volume of concentrate supplied is given below together with dilution required. (所提供的浓缩液及稀释要求参加下表)

Group 9 is a soil certified reference material. The values were determined by USEPA SW846 (3rd edition) Methods 3050/3051 using nitric acid extraction. Analysis was carried out according to USEPA methods, 6010 (ICP-EOS), 6020 (ICP-MS), and 7000 (AES).

The sample is suitable for these and other similar methods. (Group 9 是土壤的有证参考物质。)

Groups 9 to 34 utilise samples supplied by RTC – Sigma –Aldrich. (Group 9-34 样品由 RTC-Sigma-Aldrich 提供。)

Group	Analytes	Concentration Ranges (after dilution approx)	Concentrate volume (approx)	Dilution required
1	BOD 生化需氧量 COD 化学需氧量 TOC 总有机碳	2.0 - - - -1000 mg/L 20.0 - - - - 2000 mg/L 4.0 - - - - 400 mg/L	50ml	x20
2	Dissolved Solids 溶解固体 Suspended Solids 悬浮固体 Total Solids 总固体 Settled COD 稳定化学需氧量	1.0 - - - -1000 mg/L 1.0 - - - -1000 mg/L 10.0 - - - - 2000 mg/L 20.0 - - - - 2000 mg/L	100ml	x20
3	Nitrate (N) 硝酸盐 Nitrite (N) 亚硝酸盐 Ammonia (N) 氨 Chloride 氯化物 Orthophosphate (P) 正磷酸盐 Sulphate (SO4) 硫酸 Total Phosphorus (P) 总磷 Kjeldahl Nitrogen (N) 凯氏氮 Total Nitrogen (N) 总氮	0.5 - - - - 50 mg/L 0.2 - - - - 10 mg/L 0.2 - - - - 20 mg/L 10.0 - - - 500 mg/L 1.0 - - - - 100 mg/L 10.0 - - - 500 mg/L 0.2 - - - -5 mg/L 2.0 - - - -50 mg/L 2.0 - - - -50 mg/L	240ml	x20
4	pH Electrical Conductivity 电导率	1.0- - - - 13.0 Units 200 - - - - 2000 µS/cm	125ml	No dilution required
5	MBAS Alkylphenol Ethoxylates 烷基酚乙氧基 (APE)	0.2 - - - - 20 mg/L 2.0 - - - - 50 mg/L	50ml	x20
6	Cyanide FREE 游离氰化物 Cyanide TOTAL 总氰化物	2.0 - - - - 25 mg/L 5.0 - - - - 50 mg/L	50ml	x20

Group	Analytes	Concentration Ranges (after dilution approx)	Concentrate volume (approx)	Dilution required
7	Phenol 苯酚 (Monohydric by distillation) 一元蒸馏	1.0 - - - - 20 mg/L	50ml	x20
8	Cadmium 镉 Chromium 铬 Nickel 镍 Lead 铅 Copper 铜 Zinc 锌 Arsenic 砷 Selenium 硒 Mercury 汞	0.10 - - - - 5 mg/L 0.10 - - - - 5 mg/L 0.10 - - - - 5 mg/L 0.10 - - - - 5 mg/L 0.10 - - - - 10 mg/L 0.10 - - - - 10 mg/L 0.05 - - - - 5 mg/L 0.05 - - - - 5 mg/L 0.01 - - - - 1 mg/L	50ml	x20
9	Cadmium 镉 Lead 铅 Chromium 铬 Arsenic 砷 Barium 钡 Nickel 镍 Copper 铜 Zinc 锌 Mercury 汞	1 - - - - - 400 mg/kg 10 - - - - -2000 mg/kg 10 - - - - -500 mg/kg 1 - - - - -500 mg/kg 30 - - - - -2500 mg/kg 1 - - - - -200 mg/kg 2 - - - - -200 mg/kg 10 - - - - -200 mg/kg 0.1 - - - - -200 mg/kg	6g to 8g	No dilution required
10	Alkalinity 碱性 Calcium 钙 Conductivity 电导率 Total Hardness 总硬度 Magnesium 镁 Potassium 钾 Sodium 钠	10-120 (as CaCO ₃) mg/L 3.5-110 mg/L 200- 930 μS/cm 17-440 (as CaCO ₃) mg/L 2-40 mg/L 4-40 6-100	2 x 23ml	up to 1L
11	BOD 生化需氧量 COD 化学需氧量 TOC 总有机碳	15-250 mg/L 30-250 6-100	23ml	up to 1L
12	Bromide 溴化物 Chloride 氯化物 Fluoride 氟化物 Sulphate 硫酸盐	1-10 mg/L 35-275 0.3-4 5-125	23ml	up to 1L
13	pH	5-10 pH units	100ml	No dilution required
14	Ammonia (as N) 氨 Nitrate (as N) 硝酸盐 Orthophosphate (as P) 正磷酸盐	0.65-19 mg/L 0.25-40 0.5-5.5	23ml	up to 1L
15	Kjeldahl Nitrogen (as N) 凯氏氮 Total Nitrogen (as N) 总氮 Total Phosphorus 总磷	1.5-35 mg/L 1.5-35 0.5-10	23ml	up to 1L

Group	Analytes	Concentration Ranges (after dilution approx)	Concentrate volume (approx)	Dilution required
16	Total Solids 总固体	140-675 <i>mg/L</i>	500ml	No dilution required
	Total Dissolved Solids 总溶解固体	140-650		
	Total Suspended Solids 总悬浮固体	23-100		
26	Settleable Solids 沉淀固体 (Volumetric test using Imhoff cone) 体积测量用英霍夫式锥形管	5-100 <i>mL/L</i>	25g	up to 1L
17	Nitrite (as N) 亚硝酸盐	0.4-4 <i>mg/L</i>	23ml	up to 1L
19	Hexavalent Chromium 六价铬	45-880 <i>µg/L</i>	23ml	up to 1L
20	TRACE METALS 1 Aluminium 铝	200-4000 <i>µg/L</i>	23ml	up to 1L
	Arsenic 砷	70-900		
	Beryllium 铍	8-900		
	Cadmium 镉	8-750		
	Chromium (Total) 总铬	17-1000		
	Cobalt 钴	28-1000		
	Copper 铜	40-900		
	Iron 铁	200-4000		
	Lead 铅	70-3000		
	Manganese 锰	70-4000		
	Mercury 汞	2-30		
	Nickel 镍	80-3000		
	Selenium 硒	90-2000		
Vanadium 钒	55-2000			
Zinc 锌	100-2000			
27	TRACE METALS 2 Antimony 锑	95-900 <i>µg/L</i>	23ml	up to 1L
	Barium 钡	100-2500		
	Boron 硼	800-2000		
	Molybdenum 钼	60-600		
	Silver 银	26-600		
	Strontium 锶	30-300		
	Thallium 铊	60-900		
21	Tin 锡	1000-5000 <i>µg/L</i>	23ml	up to 1L
	Titanium 钛	80-300		
18	Oil & Grease(Suitable for EPA 1664, SM 5520B and other gravimetric methods.) 油脂	10-100 <i>mg/L</i>	3ml	up to 1L
23	Total Recoverable Petroleum Hydrocarbons For Analysis by IR 采用 IR 分析总可回收石油碳氢化合物	20-300 <i>mg/L</i>	3ml	up to 1L
24	Total Residual Chlorine 总残留氯	0.05-3 <i>mg/L</i>	3ml	up to 1L
25	Total Sulphide 总硫化物	1-10 <i>mg/L</i>	3ml	up to 1L

Group	Analytes	Concentration Ranges (after dilution approx)	Concentrate volume (approx)	Dilution required
22 VOC 1	Benzene 苯	8-120 $\mu\text{g/L}$	3ml	up to 100mL
	1,2-Dichlorobenzene 1,2-二氯苯	8-100		
	1,3-Dichlorobenzene 1,3-二氯苯	9-125		
	1,4-Dichlorobenzene 1,4-二氯苯	8-115		
	Ethylbenzene 乙苯	9-100		
	Methyl tert-butyl ether (MTBE) 甲基叔丁基醚	15-100		
	Naphthalene 萘	8-190		
	Toluene 甲苯	7-100		
	1,2,4-Trimethylbenzene 1,2,4-三甲基苯	8-100		
	1,3,5-Trimethylbenzene 1,3,5-三甲基苯	8-100		
	m+p-Xylene 间二甲苯, 对二甲苯	8-300		
	o-xylene 邻二甲苯	8-300		
Total Xylene 总二甲苯	20-300			
28 VOC 2	VOC 2 Bromodichloromethane 溴二氯甲烷	8-115 $\mu\text{g/L}$	3ml	up to 100mL
	Bromoform 三溴甲烷	11-100		
	Tetrachloromethane (carbon tetrachloride) 四氯化碳	10-140		
	Chlorobenzene 氯苯	10-120		
	Chloroform 三氯甲烷	12-95		
	Dibromochloromethane 二溴一氯甲烷	11-140		
	1,2-Dichloroethane 1,2-二氯乙烷	10-150		
	Methylene Chloride (dichloromethane) 二氯甲烷	10-125		
	Tetrachloroethene (tetrachloroethylene) 四氯乙烯	10-150		
	1,1,1-Trichloroethane 1,1,1-三氯乙烷	10-90		
	Trichloroethene 三氯乙烯	10-95		

Group	Analytes	Concentration Ranges (after dilution approx)	Concentrate volume (approx)	Dilution required
30 PAHs	Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Chrysene Dibenz (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	0.3 - 10 µg/L	3 mL	to 1 L
31 Pesticides minimum of 80% of the analytes listed	Aldrin 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Heptachlor Heptachlor Epoxide alpha-BHC beta- BHC delta-BHC gamma-BHC (Lindane) alpha-chlordane gamma-chlorodane Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Aldehyde Endrin Ketone Endrin Methoxychlor	0.5 – 20 ug/L	2 x 3 mL	to 1 L

Group	Analytes	Concentration Ranges (after dilution approx)	Concentrate volume (approx)	Dilution required
32	Dissolved Oxygen (Winkler)	1.0 to 100 mg/L	23 mL	to 1 L
33	C9-C18 Aliphatic Hydrocarbons C19-C36 Aliphatic Hydrocarbons C9-C10 Aromatic Hydrocarbons C11-C22 Aromatic Hydrocarbons Diesel Range Organics (DRO) Diesel Range Organics C10-C28 Total EPH	500 to 4000 ug/L	1.5 mL	to 1 L
34	Benzene Ethylbenzene Methyl tert-butyl ether (MTBE) Naphthalene Toluene m+p-Xylene o-Xylene Xylene total C5-C8 Aliphatic Hydrocarbons C9-C12 Aliphatics C9-C10 Aromatic Hydrocarbons Gasoline Range Organics (GRO), C5-C12 Gasoline Range Organics (GRO), C6-C12 Gasoline Range Organics (GRO), C5-C10 Gasoline Range Organics (GRO), C6-C10 Total Purgeable Hydrocarbons	0- 4000 ug/L	1.5 mL	to 100 mL