

# SPE-Express<sup>®</sup> 2

## Automated Oil & Grease Extraction System

Routine lab methods like EPA Method 1664 are a mainstay of sample assessment requirements in most environmental or regulatory compliance labs. Often considered as an afterthought, these methods are seldom changed or improved upon. But using updated technology such as our new SPE-Express 2 system can offer opportunities for labs to become more efficient and capture time savings, conserving valuable resource time for other critical activities.

- Automates extraction and evaporation of the sample, eliminating a “hands on” transfer step
- Built-in fluid sensor verifies extraction progress to check for a clogged disk
- Simultaneous operation capability of up to 3 stations for optimal efficiency

The SPE-Express 2 automates oil and grease analysis (EPA Method 1664) providing an automated efficient analysis with reduced errors conserving your labs most important resource—its analysts’ time.

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## SPE vs manual methods

The SPE-Express 2 system automates oil and grease extraction utilizing the innovative SPE methodology in place of antiquated liquid/liquid extraction techniques that require manual time-intensive sample interaction. By adding a fluid management system to the extraction process and built-in evaporation capability, a hands-free method is accomplished.



SPE-EXPRESS 2 - Main Menu	
Run Method	
Status	Precheck
Prime	Solvent Purge
Depressurize	Advanced

### Automation

A factory installed, **software-controlled**, method program performs system setup, execution and cleaning in compliance with EPA Method 1664. Built-in fluid sensors ensure extracted sample components are evaporated to completion every time.

The automation provided by this unique integrated extraction and evaporation system provides repeatable low limit accuracy while eliminating potential errors from analyst technique (Table 1) and costly re-runs.

Table 1: MDL study of 7.5 mg standard n=7

Rep	Initial (g)	Final (g)	Difference (g)	Result (mg/L)
1	6.3752	6.383	0.0078	7.8
2	6.3165	6.324	0.007	7
3	6.3366	6.344	0.0075	7.5
4	6.3249	6.332	0.0073	7.3
5	6.2914	6.299	0.0076	7.6
6	6.35	6.358	0.0075	7.5
7	6.3421	6.35	0.0074	7.4

Table 2: MDL blank study evaluation n=7

Rep	Initial (g)	Final (g)	Difference (g)	Result (mg/L)
1	6.1503	6.151	0.0005	0.5
2	5.9512	5.952	0.0005	0.5
3	6.0745	6.075	0.0002	0.2
4	6.0923	6.093	0.0003	0.3
5	6.0714	6.072	0.0006	0.6
6	6.0529	6.053	0.0004	0.4
7	6.0858	6.087	0.0008	0.8

Table 3: Custom configuration consumables for SPE-Express 2 workflow

SPE-Express 2 Consumables	
Extraction disks selection (UltraPrep® is sent with the unit)	1 L glass sample collection bottle selection
GUP5260 is the 47 mm UltraPrep® disk assembly*	APC1430 is a 1 L Boston round, amber (has a unique adapter)
GUP5290 is the 90 mm UltraPrep® disk assembly*	APC1500 is a 1 L Boston round, clear (has a unique adapter)
G5260 is the 47 mm UltraFlow® disk assembly**	APC1045 is a 1 L 70 mm wide-mouth, clear, with cap
G5290 is the 90 mm UltraFlow® disk assembly**	APC1040 is a 1 L 89 mm wide-mouth, clear, with cap
Drying cartridge – G1065	APC1052 is a 1 L 70 mm wide-mouth, clear, with cap
Aluminum pan – F93140DSH	APC1213 is a 1 L 53 mm wide-mouth, amber (default matching adapter)
Snip & Pour® HEM Standard – G3025	

\* Pre-conditioned SPE disks

\*\* Unconditioned SPE disks – require additional conditioning steps prior to analysis

**For more information,** contact your local Environmental Express sales rep or call **1.800.343.5319**.

