

	ARSON-PM 5.1.2.5 Fire Debris Analysis - Solvent Extraction	
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Solvent extraction can be performed on evidence items and will give a full range sampling of any ignitable liquid residue that may be present.

On occasion, solvent extraction may be an option to sample items not suitable or appropriate for other extraction techniques. Examples of this might be a container too large to place into the oven, liquid samples that contain water, etc.

5.1.2.5.1 Solvent Extraction Method

Solvents recommended would be Carbon Disulfide, Pentane, or similar. The amount of solvent needed will vary with the amount and kind of item, liquid or debris being sampled.

Agitate by gentle swirling to induce contact with the surface/substance.

Filter the extract, collecting the filtrate in a suitable small beaker or evaporating dish. (If water is present separate out using phase separating paper).

Concentrate in a fumehood, by gentle heating or room temperature evaporation over time, until nearly all of the solvent has been removed. Transfer sample to an autosampler vial and cap for analysis.

It is required to run a solvent blank with this technique. For example if 50ml of solvent is used to extract the item, and then is evaporated down to 2ml, then 50ml of solvent should be evaporated down to 2ml for the blank. This blank is compared to the extract from the debris.

After completion of analysis, add a small piece of charcoal strip or some activated charcoal to the autosampler vial and cap for appropriate retention of the sample.