

Doulton Supercarb Pesticides and Herbicides Test Report

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Results

Compounds	Input conc. ug/L	Conc. after passing stated litres					% reduction at stated litres	
		10	500	1000	2000	5000	2000	5000
x	x	10	500	1000	2000	5000	2000	5000
Lindane	10	<0.1	<0.1	<0.1	0.5	0.3	95%	98%
Heptachlor	10	<0.1	<0.1	<0.1	<0.1	0.3	>99%	>97%
Dieldrin	10	<0.1	<0.1	<0.1	<0.1	0.1	>99%	99%
pp 'DDT	10	<0.1	<0.1	<0.1	<0.1	<0.2	>99%	98%
PCB (aroclor 1260)	10	<0.2	<0.2	<0.2	<0.2	<0.2	>98%	>98%
Atrazine	10	<0.1	<0.1	<0.1	<0.1	<0.1	>99%	>99%
Simzine	10	<0.1	<0.1	<0.1	<0.1	<0.1	>99%	>99%

Procedures - Mains tap water was passed through the filter at 1 litre per minute. Using a dosing pump, solutions of the organic compounds in methanol were bled into the tap water flow above the filter. The input concentration in the effluent measured after filtering on samples taken after 10, 500, 1000, 2000 and 5000 litres.

Analysis - (organochlorine pesticides) The samples were extracted with pentane and extracts dried and concentrated using a Kuderna-Danish evaporator. Analysis was by EC-GC using a 25M WCOT column coated with OV1. The peaks were compared to those of standards passed through the same procedure. (Triazines) The samples were made alkaline with ammonia and the extracted with dichloromethane. The extracts were dried and concentrated and examined by gas chromatography using a polar capillary column (PEG 20M) and a nitrogen-selective detector. The peaks obtained were compared with those of standards treated in the same manner.

Conclusion:

The Doulton (Supercarb) filter candle gives excellent performance in removing this group of pesticides and herbicides. More than 95% of the added pesticides and herbicides are removed after 2000 and 5000 litres has passed through the filter candle.

Signed

David Meek for SAC Scientific
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