

RapidVap N2 System for Evaporation per EPA Method 8082

Principle

US EPA Method 8082 ipolychlorinated biphenyls (PCBs) as Aroclors or as individual PCB congeners in extracts from solid, tissue and aqueous matrices. *This application note uses Labconco's RapidVap N2 Evaporation System for the evaporation step of this method.

* <https://www.epa.gov/sites/default/files/2015-12/documents/8082a.pdf>

Equipment

- RapidVap N2 Evaporation System with 600 ml block (7910000)
- 600 ml glassware with 1.5 ml end point (7913900)
- Glassware caps (7925500)
- Methylene Chloride
- PCBs listed in table below
- Agilent 6890 GC with ECD detector



Procedure

Evaporation tubes were filled with 200 ml of methylene chloride spiked with 0.10 µg/l of target compounds semivolatile organic pesticides.

RapidVap N2 Conditions:

Block Preheat and Temperature: 40° C

Nitrogen: 80 psi

Pressure Vortex Speed: 70%

Time required: 90 minutes

The samples were evaporated to an end point of approximately 5 ml on the RapidVap N2.

After reaching an end point below 5 ml, the sample extract was transferred to a 5 ml volumetric flask. The concentrator glassware was rinsed down several times with methylene chloride during the sample transfer. The sample extract was then brought to a final 5 ml volume.

The final 5 ml were read using an Agilent 6890 GC with ECD detector. The column used was a Restek DB-5.

Percent Recoveries**Trials**

	1	2	3	4	Standard Deviation
AR1016	98.0%	59.0%	30.0%	52.0%	28.3%
AR1260	91.0%	52.0%	29.0%	50.0%	25.9%
DCB	100.0%	58.0%	32.0%	50.0%	

Following is a table with the concentrations and recoveries for the data.

	Spike Conc. (µg/L)	Recovered Concentration (µg/L)	%Recovery	Std. Dev. of % Rec.
AR1016	0.1	0.098 0.059 0.030 0.052 98.0%	59.0% 30.0% 52.0%	28.3
AR1260	0.1	0.091 0.052 0.029 0.050 91.0%	52.0% 29.0% 50.0%	25.9
DCB (Surrogate)	0.1	0.100 0.058 0.032 0.050 100.0%	58.0% 32.0% 50.0%	28.8

LABCONCO CORPORATION

8811 Prospect Avenue
 Kansas City, MO 64132
 (800) 821-5525 | (816) 333-8811

labconco.com



©2021 LABCONCO CORPORATION
 Printed in the U.S.A.
 Design subject to change without notice.
 20211221