

AR 226 - 1391

cc: A. J. Dahl - 353
B. W. Harrah - 611400
L. J. Papa - 289
Pral File
I.C.



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October 20, 1981

TO: DR. Y. L. POWER - PPD, Parkersburg
FROM: S. S. STAFFORD *S. S. Stafford*

ANALYSIS OF BLOOD SAMPLES FOR PERFLUOROOCTANOATE
(Job No. 810-578; PRAL Nos. 81-4363-4386;
Notebook Nos. E22514, E26238, E27432)

As requested in your letter of 9/22/81 to L. J. Papa, the 24 blood samples submitted then have been analyzed for perfluorooctanoate (C8) by the usual gas chromatographic method ES-567. Results and sample identification are given in the attached table.

Attachment
jah

Key Words:
Perfluorooctanoate
GC
Blood Analysis

000176

EID713278

TABLE I

CONCENTRATION OF PERFLUOROOCCTANOATE IN BLOOD (a)

Sample				GC Analysis	
PRAL No.	Date Sampled	P.R.No.	Name	Date Analyzed	[C ₈], ug F/g bl
81-4363	9/8/81			10/5/81	2.8
81-4364	9/8/81			10/2/81	0.034
81-4365	9/8/81			10/2/81	0.26
81-4366	9/9/81			10/2/81	0.14
81-4367	9/9/81			10/5/81	2.0
81-4368	9/9/81			10/2/81	0.41
81-4369	9/9/81			10/5/81	0.36
81-4370	9/10/81			10/8/81	0.15
81-4371	9/10/81			10/5 & 10/6/81	1.5
81-4372	9/10/81			10/5/81	0.21
81-4373	9/11/81			10/5/81	0.090
81-4374	9/11/81			10/5/81	0.26
81-4375	9/14/81			10/5 & 10/6/81	0.33
81-4376	9/14/81			10/8/81	0.33
81-4377	9/15/81			10/9/81	2.6
81-4378	9/15/81			10/8/81	0.071
81-4379	9/16/81			10/8/81	1.1
81-4380	9/16/81			10/8/81	0.11
81-4381	9/16/81			10/8/81	0.060
81-4382	9/17/81			10/8/81	0.20
81-4383	9/17/81			10/11/81	6.5
81-4384	9/18/81			10/8/81	0.042
81-4385	9/20/81			10/6/81	1.0
81-4386	9/20/81			10/6/81	0.13

(a) Analysis as described in Lab Method ES-567 ("Determination of Perfluorooctanoic Acid in Blood, Gas Chromatographic Method", S. Stafford, 4/3/81), using the packed column GC analysis with perfluoro-n-octanoic acid as calibration standard.

(b) Although the analysis is specifically for perfluorooctanoate (acid or salts), concentrations are given in ppm fluorine for comparison with the results of total organic fluorine analyses. (ppm F = 0.688 x ppm perfluorooctanoic acid) Estimated uncertainty is +10% relative standard deviation. The lower limit for quantitation is 0.007 ugF/g. The detection limit is ~ 0.004 ugF/g, but concentrations in that range cannot be well quantitated and are reported as < 0.007. None detected (n.d.) is reported for samples with [C₈] < 0.004 ppm, which cannot be distinguished from reagent background.