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POLYMER PRODUCTS DEPARTMENT
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810-633
cc: A. J. Dahl - 353
B. W. Karrh - N11400
L. J. Papa - 269
Pral File
I.C.

AR226-1609

December 2, 1981

TO: DR. J. M. HEDGES - PPD, Circleville

FROM: S. S. STAFFORD *S. Stafford*

ANALYSIS OF BLOOD SAMPLES FOR PERFLUOROOCTANOATE
(Job No. 810-633; PRAL Nos. 81-5258-5262, 81-5440 and -5441
Notebook Nos. E22514, E26238, E27432)

As requested in your letters of 11/2/81 and 11/16/81 to L. J. Papa,
the 7 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

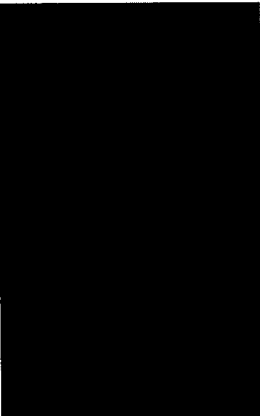
Key Words:
Perfluorooctanoate
GC
Blood Analysis

EXP000072
EID713886

000181

TABLE I

CONCENTRATION OF PERFLUOROOCTANOATE IN BLOOD (a)

<u>Sample</u>				<u>GC Analysis</u>	
<u>PRAL No.</u>	<u>Date Sampled</u>	<u>P.R.No.</u>	<u>Name</u>	<u>Date Analyzed</u>	<u>[C₈], µg F/g blo</u>
81-5258	11/2/81	1834		11/12 & 11/24/81	< .007 (c)
81-5259	11/3/81	2353		11/12/81	n.d.
81-5260	11/2/81	4162		11/12/81	n.d.
81-5261	11/2/81	6722		11/12/81	n.d.
81-5262	11/2/81	7023		11/12/81	n.d.
81-5441	11/13/81	540		11/24/81	n.d.
81-5442	11/13/81	4320		11/24/81	n.d.

- (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 $\pm 10\%$ relative standard deviation. The lower limit for quantitation is 0.007 µgF/g. The detection limit is ~ 0.004 µgF/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 $[C_8] \lesssim 0.004$ ppm. which cannot be distinguished from reagent background.
- (c) marginally detectable.