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WILMINGTON, DELAWARE 19898

POLYMER PRODUCTS DEPARTMENT
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cc: A. J. Dahl - 352
B. W. Karrh - E11400
L. J. Papa - 209
Pral File
I.C.

810-578

AR226-1605

October 27, 1981

TO: DR. Y. L. POWER - PPD, Parkersburg

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

ANALYSIS OF BLOOD SAMPLES FOR PERFLUOROOCTANOATE
(Job No. 810-578; PRAL Nos. 81-4598-4627;
Notebook Nos. E22514, E26238, E27432)

As requested in your letter of 10/6/81 to L. J. Papa, the 30 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
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Key Words:
Perfluorooctanoate
GC
Blood Analysis

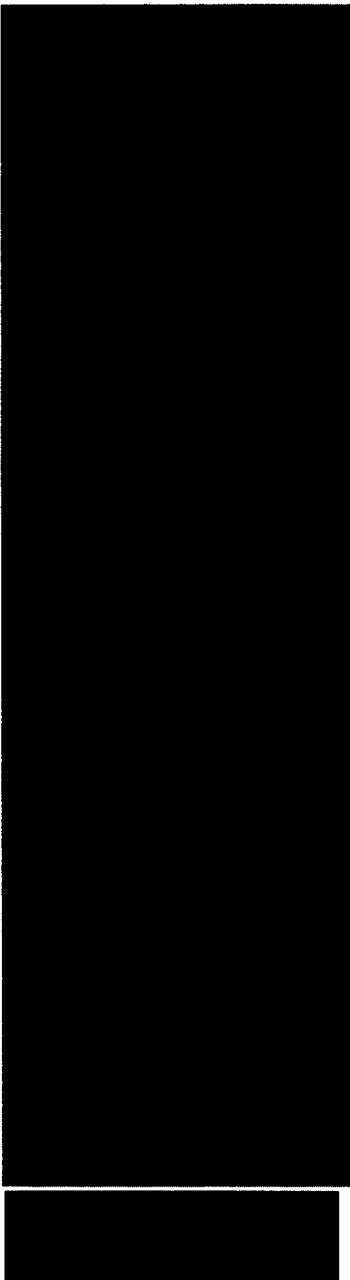
There's a world of things we're doing something about

EXP000063
EID713877

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TABLE I

CONCENTRATION OF PERFLUOROOCTANOATE IN BLOOD (a)

<u>Sample</u>				<u>GC Analysis</u> (b)	
<u>PRAL No.</u>	<u>Date Sampled</u>	<u>P.R.No.</u>	<u>Name</u>	<u>Date Analyzed</u>	<u>[C8], ug F/g blood</u>
81-4598	9/22/81	4490		10/9/81	0.10
81-4599	9/23/81	W.S.		10/9/81	0.27
81-4600	9/23/81	4293		10/9/81	0.14
81-4601	9/24/81	3872		10/9/81	0.26
81-4602	9/24/81	1843		10/9/81	0.18
81-4603	9/24/81	W.S.		10/11/81	0.45
81-4604	9/25/81	1572		10/11/81	7.5
81-4605	9/25/81	W.S.		10/11/81	0.95
81-4606	9/25/81	W.S.		10/11/81	0.070
81-4607	9/28/81	4380		10/12/81	0.66
81-4608	9/28/81	4621		10/12/81	0.12
81-4609	9/28/81	4097		10/12/81	0.17
81-4610	9/28/81	W.S.		10/12/81	0.089
81-4611	9/29/81	3708		10/12/81	0.25
81-4612	9/29/81	W.S.		10/12/81	0.12
81-4613	9/30/81	W.S.		10/12/81	0.98
81-4614	9/30/81	1632		10/23/81	4.9
81-4615	9/30/81	1762		10/12/81	0.43
81-4616	9/30/81	4533		10/13/81	0.22
81-4617	10/1/81	4778		10/14 & 10/23/81	0.0093
81-4618	10/1/81	W.S.		10/13/81	0.35
81-4619	10/1/81	872		10/13/81	0.62
81-4620	10/1/81	3474		10/13/81	0.17
81-4621	10/1/81	4495		10/13/81	0.059
81-4622	10/1/81	3490		10/14/81	8.2
81-4623	10/2/81	4057		10/13/81	0.27
81-4624	10/5/81	1727		10/13/81	0.26
81-4625	10/5/81	W.S.		10/13/81	0.20
81-4626	10/5/81	W.S.		10/13/81	0.080
81-4627	10/5/81	1972		10/13/81	1.5

REDACTED

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EID713878

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TABLE I (CONT'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. ($\text{ppm F} = 0.688 \times \text{ppm perfluorooctanoic acid}$) Estimated uncertainty is $\pm 10\%$ relative standard deviation. The lower limit for quantitation is $0.007 \mu\text{gF/g}$. The detection limit is $\sim 0.004 \mu\text{gF/g}$, but concentrations in that range cannot be well quantitated and are reported as < 0.007 . None detected (n.d.) is reported for samples with $[\text{C}_8] \lesssim 0.004 \text{ ppm}$, which cannot be distinguished from reagent background.