



E. I. DU PONT DE NEMOURS & COMPANY
WILMINGTON, DELAWARE 19898

POLYMER PRODUCTS DEPARTMENT
EXPERIMENTAL STATION

PERSONAL AND CONFIDENTIAL

cc: A. J. Dahl - 353
B. W. Karrh - N11400
L. J. Papa - 269
Pral File
I.C.

AR 226-1603

October 6, 1981

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

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

ANALYSIS OF BLOOD SAMPLES FOR PERFLUOROOCTANOATE
(Job No. 810-578; PRAL Nos. 81-4178-4214; Notebook Nos. E22514, E26238)

As requested in your letter of 9/8/81 to L. J. Papa, the 37 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

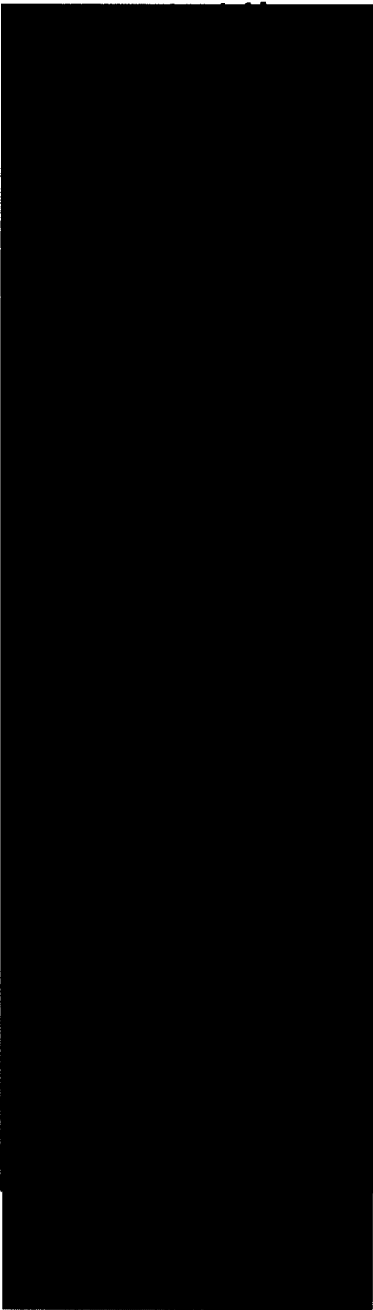
There's a world of things we're doing something about

EXP000058
EID713872

000151

TABLE 1

CONCENTRATION OF PERFLUOROOCTANOATE IN BLOOD (a)

				GC Analysis (b)	
Sample				Date Analyzed	[C8], ug F/g blood
PRAL No.	Date Sampled	P.R.No.	Name		
81-4178	8/25/81	3486		9/28/81	0.58
81-4179	8/25/81	4584		9/28/81	0.61
81-4180	8/25/81	1630		9/25/81	0.24
81-4181	8/25/81	W.S.		9/28/81	0.12
81-4182	8/25/81	1800		9/28/81	0.41
81-4183	8/26/81	4547		9/21/81	4.0
81-4184	8/26/81	4471		9/28/81	0.51
81-4185	8/26/81	3950		10/2/81	1.1
81-4186	8/27/81	4443		9/25/81	0.065
81-4187	8/27/81	W.S.		9/29/81	0.81
81-4188	8/27/81	4674		9/25/81	0.34
81-4189	8/27/81	4514		9/25/81	0.086
81-4190	8/28/81	4667		10/2/81	0.027
81-4191	8/28/81	4053		9/25/81	0.30
81-4192	8/28/81	4532		9/29/81	0.41
81-4193	8/28/81	W.S.		9/28/81	0.57
81-4194	8/28/81	4031		9/29/81	0.046
81-4195	8/28/81	4706		9/28/81	0.65
81-4196	8/28/81	4436		9/28 & 9/30/81	0.24
81-4197	8/31/81	4400		9/21/81	1.7
81-4198	8/31/81	3235		9/29/81	0.10
81-4199	8/31/81	4035		9/29/81	0.059
81-4200	8/31/81	1701		9/29/81	0.32
81-4201	9/1/81	4234		9/21/81	4.4
81-4202	9/1/81	839		9/29/81	0.21
81-4203	9/1/81	3179		9/30/81	0.17
81-4204	9/1/81	3850		9/30/81	0.21
81-4205	9/2/81	3706		9/30/81	0.33
81-4206	9/2/81	4505		9/30/81	0.17
81-4207	9/2/81	4249		9/21/81	1.4
81-4208	9/2/81	W.S.		9/30/81	0.46

EXP000059

REDACTED

EID713873

000152

TABLE I

CONCENTRATION OF PERFLUOROOCTANOATE IN BLOOD (a)

Sample				GC Analysis		(b)
PRAL No.	Date Sampled	P.R.No.	Name	Date Analyzed	[C ₈], μ g F/g blood	
81-4209	9/3/81	4409		9/30/81	0.12	
81-4210	9/3/81	3613		10/1 & 10/2/81	4.8	
81-4211	9/4/81	4479		10/1 & 10/2/81	4.2	
81-4212	9/4/81	757		9/30/81	0.54	
81-4213	9/4/81	4191		9/30/81	0.43	
81-4214	9/4/81	4275		9/30/81	1.0	

(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.

REDACTED

EXP000060
EID713874

000153