



JIM:JOE:TOM:RF
XF: CCPTAC

Interoffice Communication

To Distribution
From Tom Grumbles
Date October 13, 1983
Subject CCPTAC MEETING OF OCTOBER 11, 1983

The subject meeting was held in Ponca City with Bill Broddle, Bill Groves, Carl Kerfoot, and myself attending. A meeting agenda is attached. Minutes of the meeting follow.

1. Action items from the April 14 meeting were reviewed. All items have been completed. Discussion was held concerning inhalation and skin testing protocols. Bill Broddle prepared memos concerning these items and testing protocols in general. These were distributed at the meeting. In summary, inhalation testing for surfactant products is generally done infrequently and 24-hour skin exposures should be used when doing skin irritation testing. I will summarize Bill's memos into a concise testing protocol guideline for Conoco Chemicals' products. This will be distributed for review.
2. Toxicology testing results received since the last meeting were reviewed. This included testing on 1214 HA-30, n-550L Sulfonate, n-600L Sulfonate, and ALFOL 4. The ALFOL 4 results were from testing done at Scientific Associates in 1979, however, the report was just received (this is discussed later). A table of these results is attached.
3. Currently the only outstanding testing is the skin irritation comparison work being done on n-550L Sulfonate and other similar commercial products.

No future testing needs are anticipated at this time.

4. Aquatic toxicity testing was discussed in terms of general protocols, recent requests, and available data on Conoco products and in the literature.

Bill Broddle did a literature review and found that there is a fair amount of data in the open literature. A partial summary is attached. Also Conoco does have some "old" data available from work in the '60s and early '70s. In general, requests received over the last six months have been answered by citing data available in the open literature or the A. D. Little SDA report.

There appears to be no specific need to routinely develop aquatic testing data on Chemicals' products. Specific projects, such as ODC development, can be achieved in a reasonable time frame.

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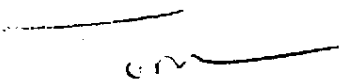
A general principle of aquatic toxicity of surfactant appears to be as follows: Acute toxicity increases with carbon number, however, so does biodegradability. Therefore, overall toxicity or environmental impact is lessened as the carbon number increases.

5. The determination that no tox testing would be necessary for Molex Raffinate if it were made commercial was reviewed. In summary, data on LPA and kerosenes could be used to develop representative statements. (WDB memo to TGG, 8/1/83)
6. The continuing obligation to report under TSCA Section 8(a) as new chemicals are added to the list was discussed. In the recent addition, (CF-R 5/19/83) of 57 chemicals, no chemicals related to our operations were listed.
7. EPA is considering a TSCA Section (4) Test Rule on C₉ Aromatics. Based on their definition of C₉ streams in the proposed rule it is not yet clear if Ethylene Unit C₉'s are included. There is a C₉ product at Chocolate Bayou.
8. Recent toxicology study results on 1-3 Butadiene were reviewed. Animal tumors have now been seen at exposures as low as 650 ppm. DuPont has lowered its AEL to 100 ppm. Exposure data at Chocolate Bayou indicates exposure to be below 10 ppm. OSHA is being pressured to lower the current PEL of 1,000 ppm.
9. Marshall Thomas Inc., Lexington, KY asked to negotiate reimbursement for use of Tobacco Sucker registration data for ALFOL 810 and 10. An agreement was reached and a letter sent to him for use with EPA.
10. Outstanding bills from Scientific Associates were discussed. Reports on testing done for C₁₀₋₁₂ paraffins and ALFOL 4 were not received for 3-4 years after sample submittal. Also SA tested more animals than generally requested. Negotiations have been held with Bob Moulton of SA on these issues. The final position of the Laboratory is that a 30% discount will be given for the testing due to late reports, but no other bill reduction will be given. It now appears there is also a discrepancy in the price per animal charged.

Tom Grumbles will present the issues to the business area to resolve payment.

11. Based on new data, the ALFOL 4 and 1-3 Butadiene MSDS will be reviewed to determine if changes are needed.

Please contact me if there are additions or corrections to these minutes.


Thomas G. Grumbles

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Distribution: W. D. Broddle, W. L. Groves, O. C. Kerfoot, M. Malloy

Attachments

Conoco Chemicals Toxicology Test Data/Update

October 1983

	Oral	<u>Skin</u> Irritation	<u>LD₅₀</u>	Eye	Inhalation
<u>Alfonics</u>					
1214-HA 30	1/10, 5 g/kg	4 hr, 3.2 ^(a) 24 hr, 5.6	0/10, 2 g/kg	3	0/10, 1.2/1.6 mg/l
1412-70	M, 1.7 F, 0.7 Repeat, M, 1.8 F, 0.9	2.2	0/10, 2 g/kg	No wash, 52; With wash, 33	10/10, 4 hr, 2.8/5.7 mg/l
<u>Nalkylenes</u>					
N-550L Sulfonate	^(D50) M ca 1.9 ^(a) F ca 1.2 ^(a) (1.7-2.3)(1.0-1.3)	4.9	0/10, 2 g/kg	No wash, 46; With wash, 27	N.d. ^(b)
N-600L Sulfonate	^(D50) M ca 2.8 ^(a) F ca 1.8 ^(a) (2.4-3.3)(1.4-2.2)	4.8	0/10, 2 g/kg	No wash, 38; With wash, 8	N.d. ^(b)
<u>Alfols</u>					
Alfol-4	2.5	1.4	LD ₅₀ : Intact, M/F: 2.2 Abraded ^(a) M/F: 2.1	28	0/10, 7.4 mg/l

^(a)New data

^(b)No data

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SELECTED ARTICLES ON AQUATIC TOXICITY OF SURFACTANTS AND ORGANICS

- 1) Z. F. Wasser und Ab. Forsch, 5/78, p 161- , Golden Orfe Fish:

	<u>LC₅₀, mg/l</u>
Ethyl benzene	44
t-butyl benzene	65
Dodecyl benzene	796
Dodecyl benzene, sodium	22
1,2 Diethyl benzene	32

- 2) ASTM, Special Tech Publication #634, K. Macek & B. Sleight

	<u>LC₅₀, mg/l</u>	<u>Minimum threshold concentration</u>
Fathead minnow: LAS		
C ₁₄	0.5	> 0.05 < 0.10
C ₁₃	1.8	> 0.12 < 0.28
C ₁₂	6.6	> 1.08 < 2.45
$\bar{x}$ C ₁₁₋₁₃	4.8	> 0.63 < 1.2
C ₁₁	21.9	> 7.2 < 14.5
C ₁₀	57.5	> 14.0 < 28.0

- 3) Journal American Oil Chemical Society, 1/78, 55, J. Alabaster

- a) Rainbow trout LC₅₀ 4 days 0.36 mg/l

C₁₁ - C₁₅ LAS

- b) Nonionics: chain length = toxicity to fish
A. Maki & W. Bishop, Arch. Environmental Contamination Toxicology 8, 599-, 1979

EO = toxicity

(K. Macek, S. Krzeminski, Bull. Environmental Contamination Toxicology 13, 377 (1975) and B. Reiff; Effect of Biodegradable on 3 Nonionic Surfactants on Toxicity to Rainbow Trout. Proc. 7th International Congress on Surfactants Active Substitutes, Moscow, 9/76

Daphnia magna, LC₅₀ mg/l (48 hr)

		<u>LABS</u>
Nonionic ethoxylates	AE ₂ :2	C ₁₁ = 20 mg/l
	AE ₄ :3	C ₁₄ = 10 mg/l
	AE ₆ :6	C ₁₈ = 0.1 mg/l
	AE ₁₀ :10	

- 4) RTECS, 1978

	<u>Toxic Level; 96 hr</u>
Methyl Benzene	10-100 ppm
Ethyl Benzene	10-100 ppm
Dodecyl Benzene	10-100 ppm

W. D. Broddle
10/83

5) Conoco data: old data

Alfonics 1012-60
1412-40
1412-60
1412-70
1618-65

Daphnia
D. magna, LC_{50} (mg/l)

7
1.3
2.2
7.1
1.7

Alkyl ethoxylated phenol - 21-32
Alcohol ethoxylated sulfate 10
Alfonic 1412 ether sulfate 13-15
C₁₂₋₁₆ sulfonate 8-11
C₁₄₋₁₈ sulfonate 4-6

6) Hazardous Information Rev., TSCA Comm., 7/81 (EPA)

Fathead minnow, LC_{50} , 96 hr

C₁₂ LAB > 1000 ppm

C₁₃ LAB > 1000 ppm

C₁₄ LAB > 1000 ppm

Rainbow trout, LC_{50} , 96 hr

C₁₂ LAB > 1000 ppm

Bluegill sunfish, LC_{50} , 96 hr

C₁₂ LAB > 1000 ppm