

BFGoodrich**Inter-Organization Correspondence**

TO	J. D. Fannin	FIELD POINT OR DEPT. & BLOC. NO.	Louisville	25-2031	DATE YOUR LETTER
FROM	P. M. Zakriski	FIELD POINT OR DEPT. & BLOC. NO.	Brecksville R & D Center, D/8506		DATE THIS LETTER
SUBJECT	Aug. 3, 1977				

Use of Gasbadge®

I have reviewed the test data available which describes the performance of the Gasbadge®. While it is true that BFG has the only data relative to vinyl chloride, that data is very strong. It is my recommendation that you purchase the Gasbadges and collection elements to permit daily monitoring of the workers returning from the pallet factory. It is not necessary to continuously conduct simultaneous samplings with the pump and tube. However, twenty-five to thirty such comparisons will be valuable. As we discussed on the phone, you could include a pump and tube sampling once or twice a week. That would provide a random spot test situation throughout the first few months of the nine month program.

Mike Paschal has prepared a brief description of the very few analysis "tricks" that will be of help to you. I am including this note and if you have any questions please call.

Once your analyses are complete and you are calculating the vinyl chloride exposure, it will be necessary to use the diffusion coefficient for vinyl chloride. We use the following value, $0.107 \text{ cm}^2/\text{sec}$ which was measured at Brecksville by A. R. Berens.

Please keep me informed on the results and progress of this program.

P. M. Zakriski (MAP)
Paul M. Zakriski

jb

cc: E. B. Katzenmeyer, Jr.
J. A. Klupar
J. M. Whitney
R. R. Taylor-S. S. Michels
M. A. Paschal-O. S. Kurtz
R & D Files

THE B. F. GOODRICH CO.

AUG 15 1977

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ANALYSIS PROCEDURE FOR GASBADGES

The gasbadge elements are placed in their vials immediately following exposure. These vials should have the threads wrapped with teflon tape and their caps sealed with electrical tape. They should be kept chilled until the time of analysis.

Two ml of carbon disulfide (CS_2) should be added to the vials by syringe. These should then be desorbed for one half hour (the vials should be shaken during this time). If an automatic sampler is to be used, 1 ml of the solution should be transferred by syringe to an auto sample vial. The samples are then analyzed by gas chromatography equipped with FID detector. The operating conditions are as follows:

	<u>Vinyl Chloride</u>	<u>Benzene</u>
Column:	3'x3/16" Porapak QS	10'x1/8" 10% SP-1000 on chromasorb WAW 100/120
Injection port temp.:	200°C	250°C
Oven temp.:	80°C + 160°C 2 min. 2 min.	120°C isothermal
Detector temp.:	250°C	300°C
Carrier flow:	30 cc/min	30 cc/min
Elution time:	- determined from standards -	

Inter-organization Correspondence

B.F. Goodrich

VCI Cross Check Distribution

FIELD POINT OR DEPT. & BLDG. NO.

25-2195

DATE YOUR LETTER

P. M. Zakriski

FIELD POINT OR DEPT. & BLDG. NO.

Brecksville R & D Center, D/8506

DATE THIS LETTER

Dec. 12, 1977

SUBJECT

BFG Vinyl Chloride Cross Check Program - A Direct Link to NIOSH Cross Check Program

Each plant laboratory that deals with vinyl chloride participates in a cross check program run by the Environmental Laboratory. The performance of the plant laboratories as judged from the results of this program is excellent. At this time, we can relate this performance to the industry as a whole through a similar program conducted by NIOSH that the Environmental Lab participates in. The Environmental Lab performs very well in the NIOSH vinyl chloride cross check program. Therefore, since the Environmental Lab also participates in the BFG program the plant labs can be referenced to the NIOSH program.

The NIOSH vinyl chloride program has distributed two sets of standards in 1977. Each set consisted of carbon tubes to be analyzed by the CS₂ wash procedure. The results of the analyses of the Environmental Laboratory show that this laboratory is always within $\pm 4\%$ of the theoretical loading. This performance is quite good but not unique to the Environmental Lab. In the last BFG VCI cross check round, the plant laboratories and the Environmental Lab were within $\pm 8\%$ of theoretical. Therefore, we may conclude that the plant laboratories would all be within the VCI regulation ($\pm 25\%$) if they participated in the NIOSH program.



Paul M. Zakriski

jb

cc: O. S. Kurtz
J. F. Stuesse
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