

*copy*

J. L. Ledbetter - B-2-N  
L. F. Steinbach - G-4-E  
R. J. Stratmeyer - B-2-N  
N. L. Sample - B-2-N  
A. H. Schwab - JFQ  
H. A. Partlow - JFQ  
R. D. McIntosh - JFQ

*See & entry stock #1*  
DBH  
9/12/68

J. R. Kellogg - JFQ  
H. L. Minckler - B-2-S  
T. M. Patrick - Res. 1  
R. E. Keller - Res. 1  
D. C. Reed - Res. 1  
O. J. Marchand - Res. 1

MONSANTO COMPANY  
Organic Chemicals Division

*TO Horner 8/28*

To the General Manager  
Organic Chemicals Division

Estimate No. 1908  
Dept. No. 76001-0000922  
Plant - R&D Laboratories

*9/12 Out of 5 week  
production line today.  
Will be in testing &  
not lab one week. We  
need approval within  
several days as we  
will start at end of  
line with 5 week delay  
R&D  
This is part of a \$5,000  
FF project.*

PURCHASE BIOMEDICAL GAS CHROMATOGRAPH

Capital Addition                      \$7,000

DESCRIPTION

Purchase biomedical gas chromatograph with all-glass system and multiple flame ionization and electron capture detectors for the analysis of thermally sensitive and polar materials.

APPROVAL

General Manager

\_\_\_\_\_  
H. L. Minckler

\_\_\_\_\_  
Date

MONS 034702

#### NEED FOR THE PROJECT

Late in 1966 Swedish researchers reported the presence of polychlorinated biphenyls in a variety of biological samples. Since that time the Organic Chemicals Division has received a number of requests for Aroclor samples from active pesticide research groups. We also know that the U. S. Public Health authorities have initiated studies to evaluate the significance of this environmental contamination.

To assess the validity of these findings, the impact they may have on our Aroclor business, and to avoid restrictive legislation, the Functional Fluids Business Group has begun its own study.

The Applied Sciences Section has been requested to develop the necessary analytical methodology for this project. To do this and to do it correctly, we need to purchase a biomedical gas chromatograph. This instrument is designed specifically for this type of analysis and is used by most pesticide researchers, including the Public Health authorities.

Any analytical information we generate will be judged in terms of the techniques and equipment used. By using the tools most familiar to these people, we feel any information we provide will be more effective.

The biomedical-type chromatograph provides an all-glass system with direct injection into a U-shaped glass column which is attached directly to the base of the flame ionization or electron capture detector. This allows high efficiency analyses to be made on pesticides, steroids, organo metallics and polyfunctional organic chemicals which are thermally or catalytically unstable or have polar functional groups that, in the environment of the ordinary gas chromatograph, cause them to decompose or become irreversibly adsorbed.

The R&D Labs do not at present have such instrumentation. Therefore, we recommend purchase of such a chromatograph for initial use on the environmental Aroclor project and to broaden the capability of the Applied Sciences Section in the gas chromatographic analysis of unstable organic systems.

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STATUS OF THE PROJECT

No commitments will be made until this project is approved.

RECOMMENDATION

It is recommended that this project be approved.

Submitted by

E. M. Emery  
Group Leader

R. E. Keller  
Research Section Manager

T. M. Patrick, Manager  
R&D Laboratories

mw

8/28/68

MONS 034704