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F & M SCIENTIFIC CORPORATION

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July 29, 1963

Mr. William O. Miller
Isotopes Branch
Division of Licensing & Regulations
United States Atomic Energy Commission
Washington 25, D. C.

Dear Mr. Miller:

Thank you for your letter of July 23rd concerning our data and details of two chromatographic detectors that we wish to market. John Schmit and myself have discussed some of the points mentioned in your letter with Mr. Bell on July 25, 1963, and we hope that all matters in your letter can now be clarified.

The points detailed below are numbered as in your original letter.

1. Foil will be manufactured by U.S. Radium. Type lab - 508-1, Stainless steel foil coated on one side only. The same foil is used in each of our two different cells.

2. The Tritium foil will have an activity of 200 millicuries maximum, but most foils will be below 180 millicuries.

3. The specific activity of the Hydrogen 3 foil to be used is 1 curie per square inch (nominal).

4. Foil used for tests described in Appendix III is as specified in 1, 2, and 3 above.

5. The label used on both our detector cells has been modified to include the desired statement, "This device contains 200 millicuries of tritium (hydrogen 3) date_____." Revised drawings are enclosed. Drawing nos: 1-2842-B, 1-2841-B.

An additional label will be added to the unit on a sheet metal cover which normally will cover the detector and the large labels mentioned above. At least one of these labels will always be visible when a radioactive detector is installed on the unit. Drawing #1-2846-A details this second label.

6. Model numbers of our cells are -

Micro-cross section	Model #2-2830
Electron Capture	Model #2-2837

Both of these detectors can be used with several basic units. They are Model 400, Model 700 and Model 810.

As the model number of the chromatograph will vary with changes in the accessories supplied with the unit, it is not possible to be more specific with respect to the model number of chromatographic equipment.

7. Method used to prevent tritium foil from contacting the cell anode.

In each cell, the foil is held in place by a teflon or glass/teflon washer as specified below. When assembled, the washer is firmly clamped against the foil preventing movement.

Electron capture: Part 6 on drawing #3-2831-A is the 25% glass filled washer separating anode and foil. See also piece 6 on drawing #2-2832-A.

Micro-Cross Section: Part 4 on drawing #3-2825-A is the teflon washer separating anode and foil, see also part 6 on drawing 2-2829-A.

8. Correlation of drawings: Parts for each detector are specified as below:

Electron capture detector, see assembly drawing #2-2837. Parts used are specified as: Item 1, quantity 1, description "detector body,2 ident., 3-2831-10. 3-2831-10 is the drawing number with the item number of that particular part as it appears on the drawing as a suffix. The detector body would thus be item 10 on drawing 3-2831.

The micro-cross section detector is dealt with similarly on drawing #2-2830.

The drawings listed below are used for both detectors:

Dwg. #	Description
1-2825-A	Interlocking relay circuit
2-2828-A	Washer-spacer and plate cover
2-2827-A	Heatsink
1-2839-A	Gas exit connector
1-2840-A	Cathode plug
2-2845-A	Strap
2-2844-A	Cable
2-2843-A	Block insulation
1-2835-A	Electrode assembly

Dwg. #	Description
1-2846-A	Label

Electron Capture detector only. (2-2837) JWB

Dwg. #	Description
1-2836-A	Electrode assembly
1-2828-A 1-2836A JWB	End piece assembly
2-2837-A	Assembly detector block
2-2832-A	Detector Electron capture assembly
3-2831*	Detector electron capture
1-2841-B	Label (replaces 1-2841-A)

*Some parts detailed on this drawing are specified for M.C.S. detector also.

Micro-cross section only. (2-2830) JWB

Dwg. #	Description
1-2833-A	Electrode assembly
2-2830-A	Assembly detector block
2-2829-A	Detector Micro-Cross section assembly (some parts specified from drawing #3-2831).
3-2825-A	Detector micro-cross section detail
1-2842-B	Label (replaces 1-2842-A).

All drawings sent to you may be retained indefinitely for your file; however, we have applied for the withholding of certain documents from public disclosure. The drawing numbers concerned are:

3-2831-A	3-2825-A
2-2832-A	1-2838-A
2-2837-A	1-2835-A
1-2836-A	2-2827-A
1-2833-A	2-2828-A
2-2830-A	1-2825-A
2-2829-A	

We hope to shortly visit you when we can bring samples of our two cells and clean up one or two other points as discussed between myself and Mr. Bell.

Very truly yours,

J. Peters
Research Chemist

JP:md

Encl.