

# Instructions for operating Report 78 Spectrum Processor

## **1. Starting the processor**

- If using Windows 95 or Windows NT create a short cut to spec78.exe.
- If using Windows 3.1 locate the program group in which the processor has been installed.
- Double click on either the program icon or the short cut icon.
- To start the processor click the OK button on the first box that appears.
- Note, your computer will need a resolution of at least 800 \* 600 for the program to work without displaying horizontal and vertical scroll bars.

## **2. Defining Parameters**

- Click on the Generate Spectrum button.
- From the option box choose a target material : either W, Mo or Rh. (The options appear in a drop down list if you click on the down facing arrow at the right side of the option box).
- Select a preferred tube voltage. The range of voltage which are available depends on the target material. The processor will not allow you to put in an inappropriate kVp.
- Enter the desired anode angle. Again the processor will not allow you to enter an inappropriate anode angle.
- If you have chosen a Tungsten target enter the desired voltage ripple. Note ripple values of 0 to 30% are permissible but only at accelerating voltages of between 55 and 90 kVp.
- Selection of materials used to attenuate the spectrum can be achieved in the following manner
  - a) **To add new material** : click on the New Material button and then use the material drop down list to select the material you wish. Choose the desired thickness of material in millimetres.

To select another material click New Material again and repeat the process.
  - b) **To delete an attenuator** : select the desired material with the mouse and press the Delete Material button.
  - c) **To remove all attenuators from the list** : click on the Clear All button.
  - d) **To adjust the thickness of a material in the attenuator list** : highlight the material with the mouse and adjust the thickness in the box to the right of the materials drop down list.

- To process the spectrum which you have defined click on the Process Spectrum box.

### ***3. Displaying and Saving the Processed Spectrum***

If the displayed spectrum is not at full screen size ( and you wish it to be) press the maximise button at the top right hand corner of the window.

- Information about the spectrum you have chosen and the spectrum itself are printed on the screen. Should you wish to access the report 78 file its name is also printed on the screen.
- By clicking appropriately you can select whether the processed photon spectrum is displayed linearly or logarithmically.
- If you wish to save the spectrum to a file click on the Save Spectrum button. You are then given the option to save the file as a report 78 data file in whichever directory you choose. You must of course select an appropriate name.
- Should you wish to print the spectrum then click on the Print Results button.
- To process a new spectrum click on the New Spectrum button.
- To close the program double click on the upper left hand box on the program window.

### ***4. To Display a Spectrum previously stored in a file.***

If you have previously stored a spectrum file then

- a) click the Load Spectrum From File button
- b) click on the Filename button
- c) choose a file using the Select Spectrum Data File box which appears
- d) press OK
- e) either add further attenuating material or press the Process Spectrum button.