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## General information

Chose the protocol number that you wish to use

Select the protocol flag for the protocol and retain it to use to count the protocol. As a general rule you must always use the Enter key in order to proceed in the software. Using the arrow keys will not enter a new value and the old value will be saved even if you have typed in a new value. As a rule of thumb it is better to always proceed through the software with the Enter key rather than the arrow keys

On any page you are viewing there are instructions for what you may enter in a line just above the function keys.

### The Edit Protocol Page

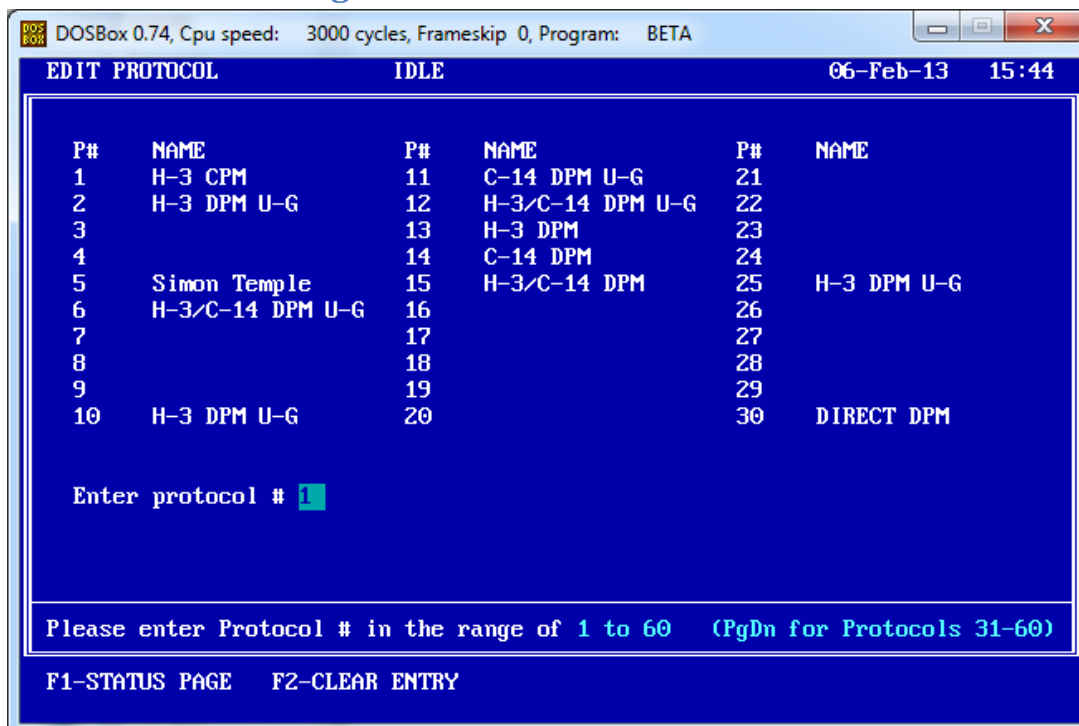


Fig 01

Press *F1* to go to the edit protocol page

Enter the number of the protocol that you wish to use – in this case we have chosen protocol 17. You must use the *Enter* key to proceed.(Fig 01)

Training in liquid scintillation and gamma counting

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Page 1 - Count Conditions

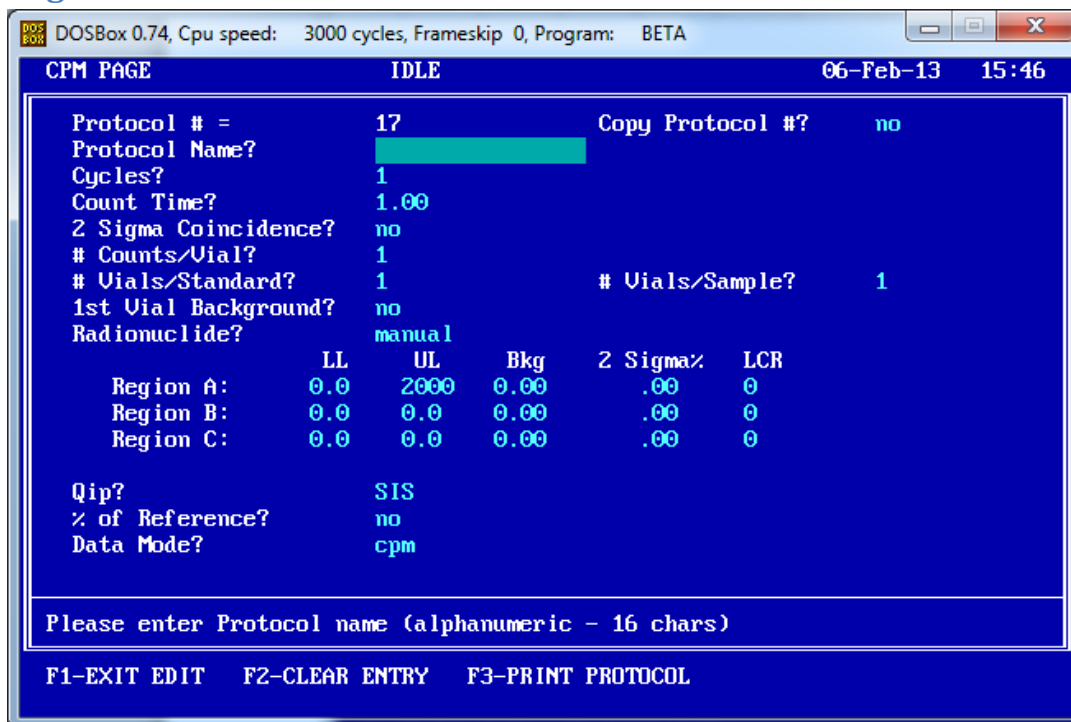


Fig 02

The page will look like Fig 02

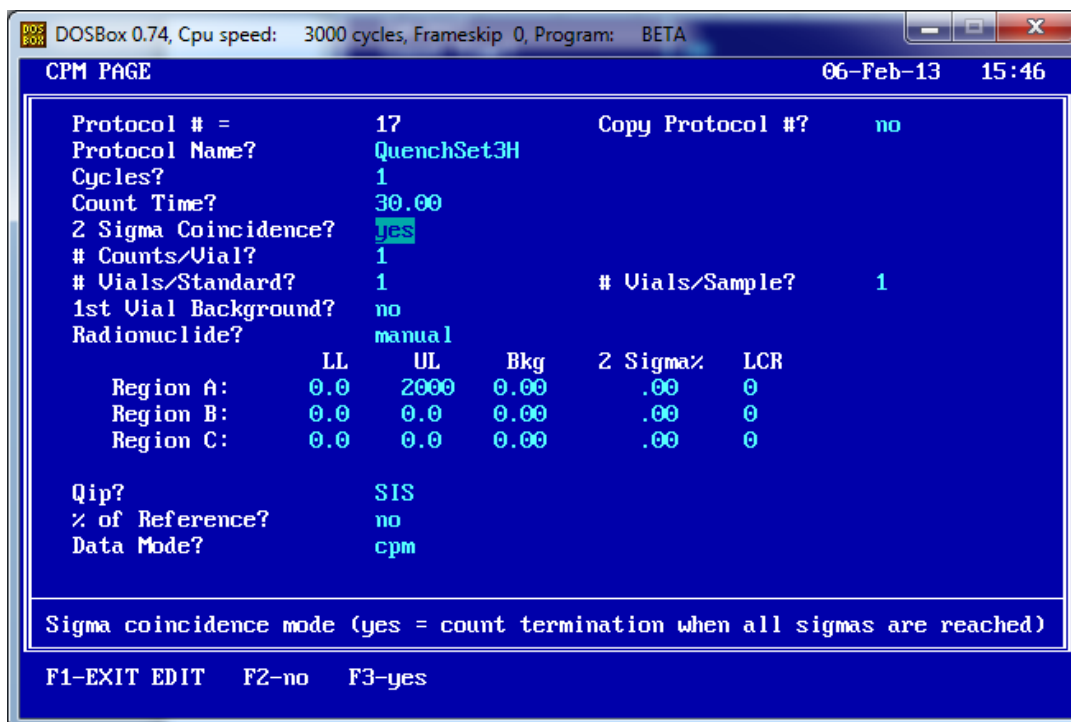


Fig 03

In the Protocol Name put the name of the quench set. In the example Fig 03 "QuenchSet3H" has been entered

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Leave Cycles as 1, enable 2 Sigma Coincidence to Yes (F3) and ensure that the 1<sup>st</sup> Vial Background is set to *No as shown in Fig 04*

The Count Time must be set to 30 minutes to achieve good statistics

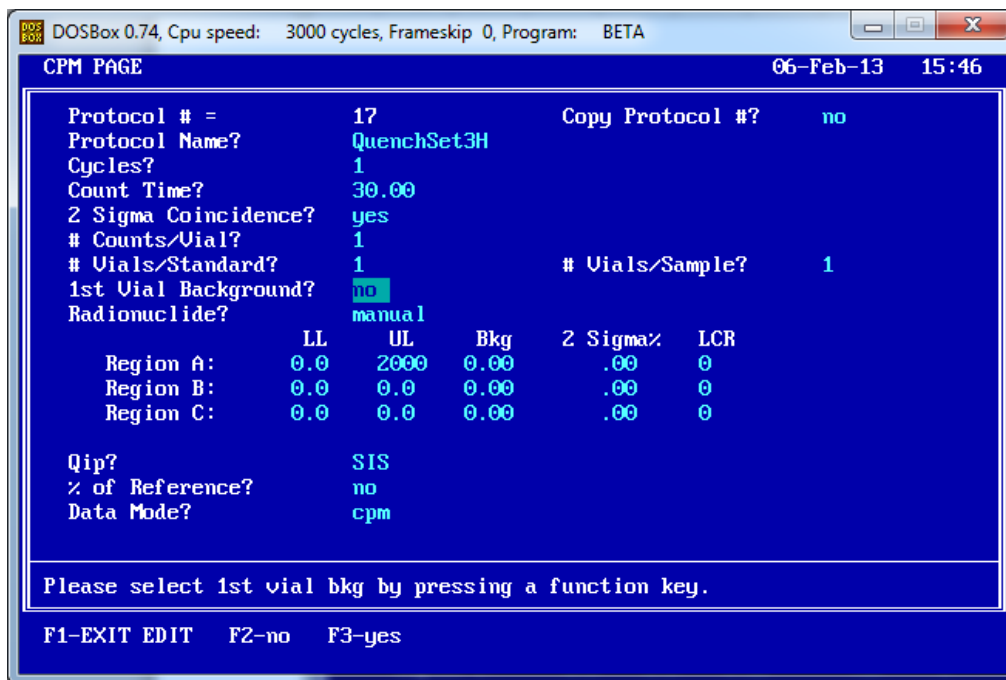


Fig 04

The Radionuclide must be set to the isotope type you are using. Select from the list at the bottom of Fig 05

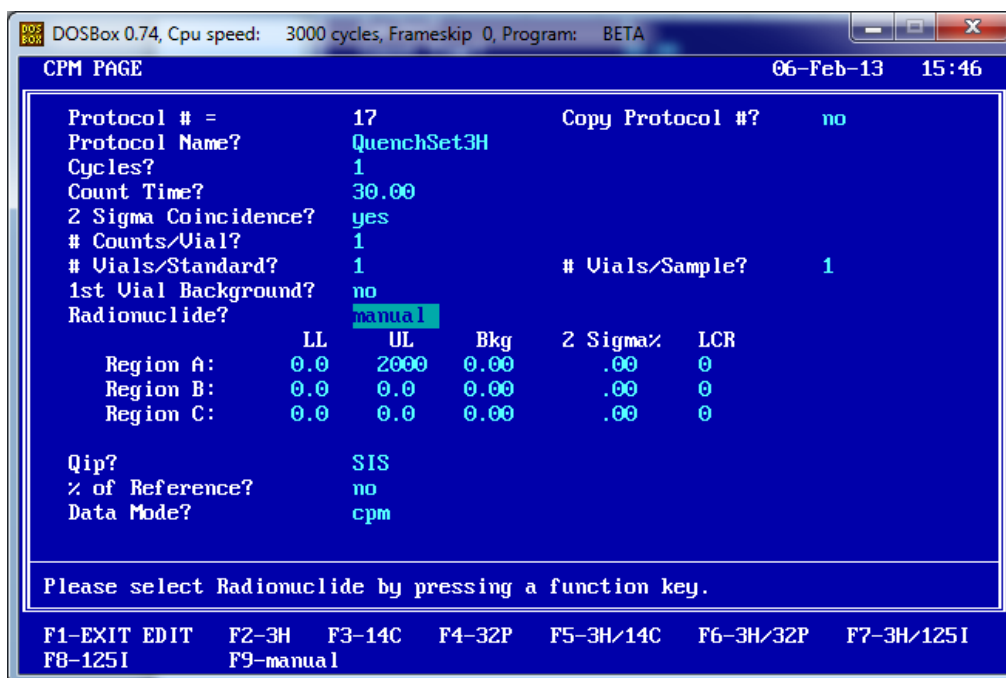


Fig 05

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Loading a quench correction curve in the 2100TR scintillation counter

The example Fig 06 shows that 3H was selected

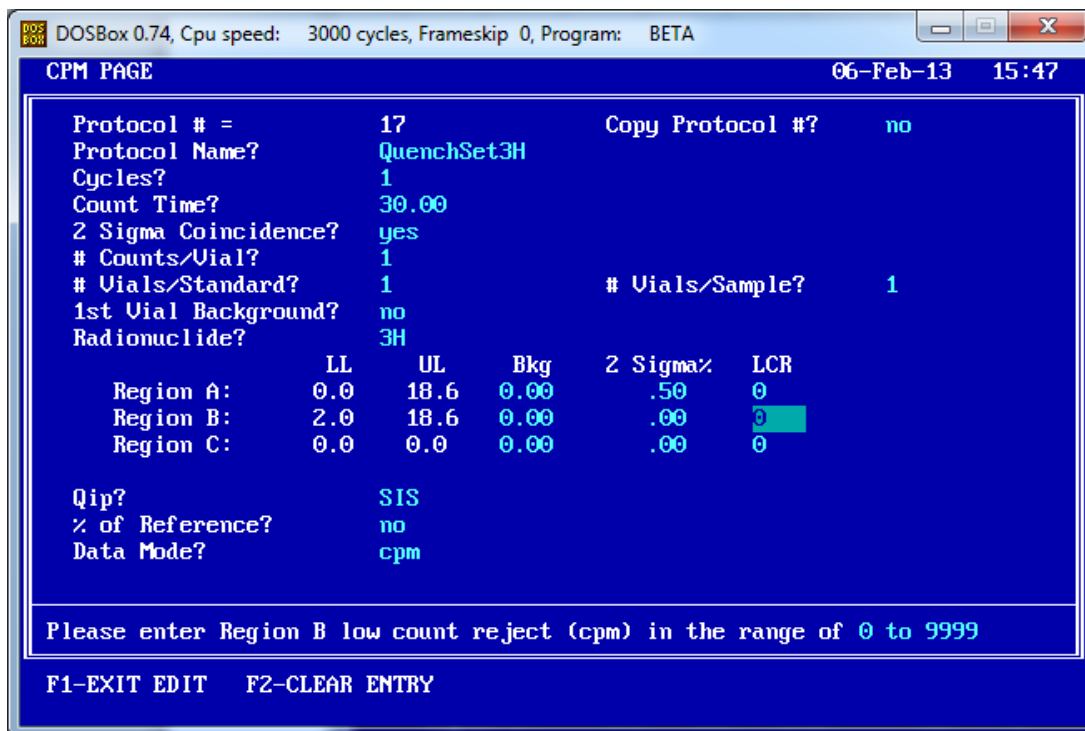


Fig 06

Leave tSIE as the QIP as shown in Fig 07

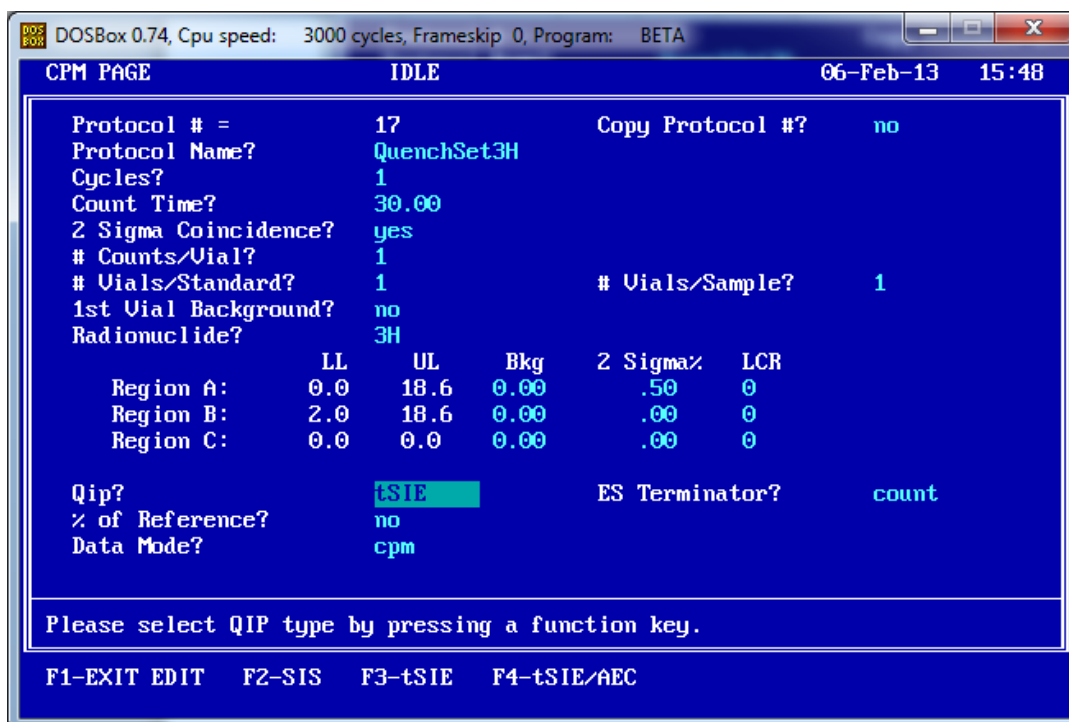


Fig 07

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Leave the ES Terminator as Count as shown in Fig 08

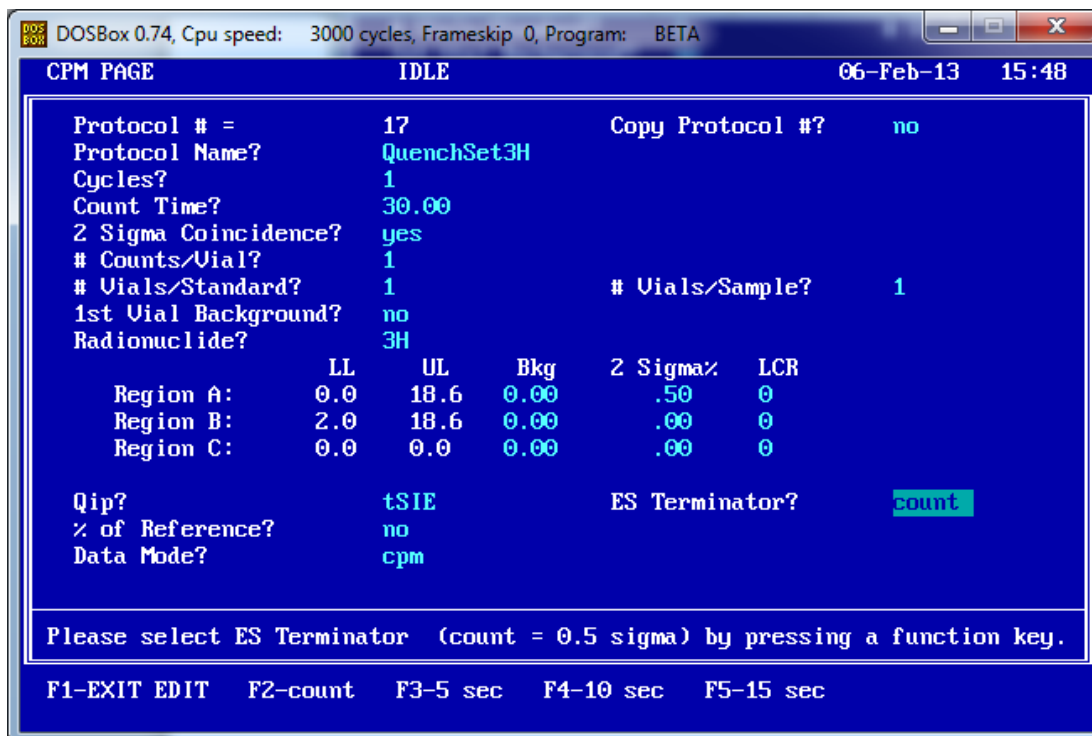


Fig 08

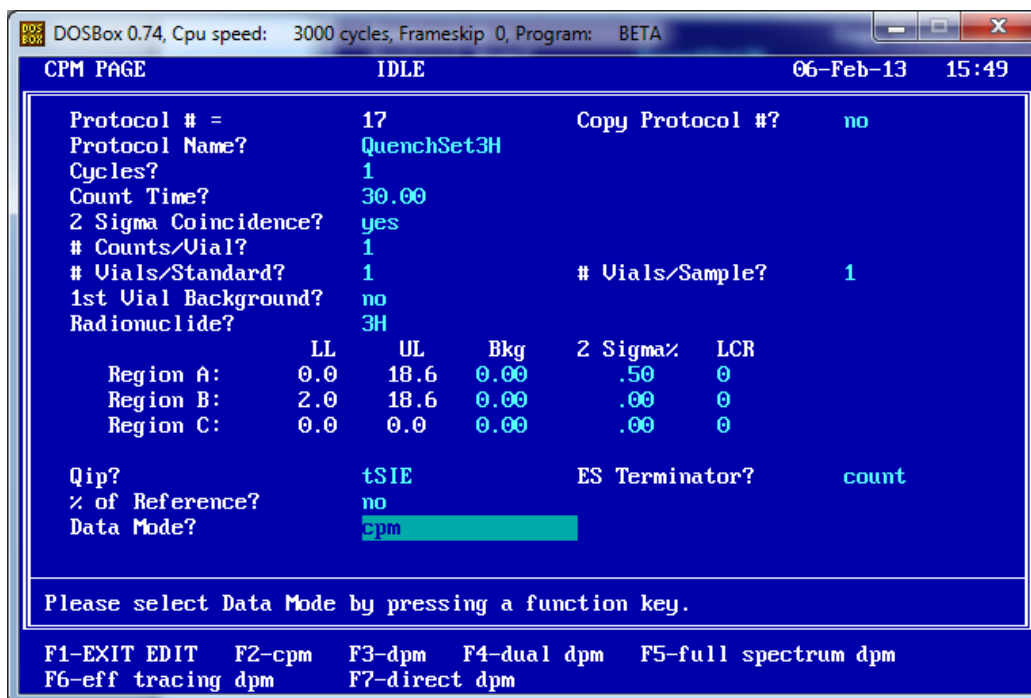


Fig 09

From the list at the bottom of the page shown in Fig 09 select dpm (F3 button)

Training in liquid scintillation and gamma counting

Loading a quench correction curve in the 2100TR scintillation counter

The completed page should look something like Fig 10

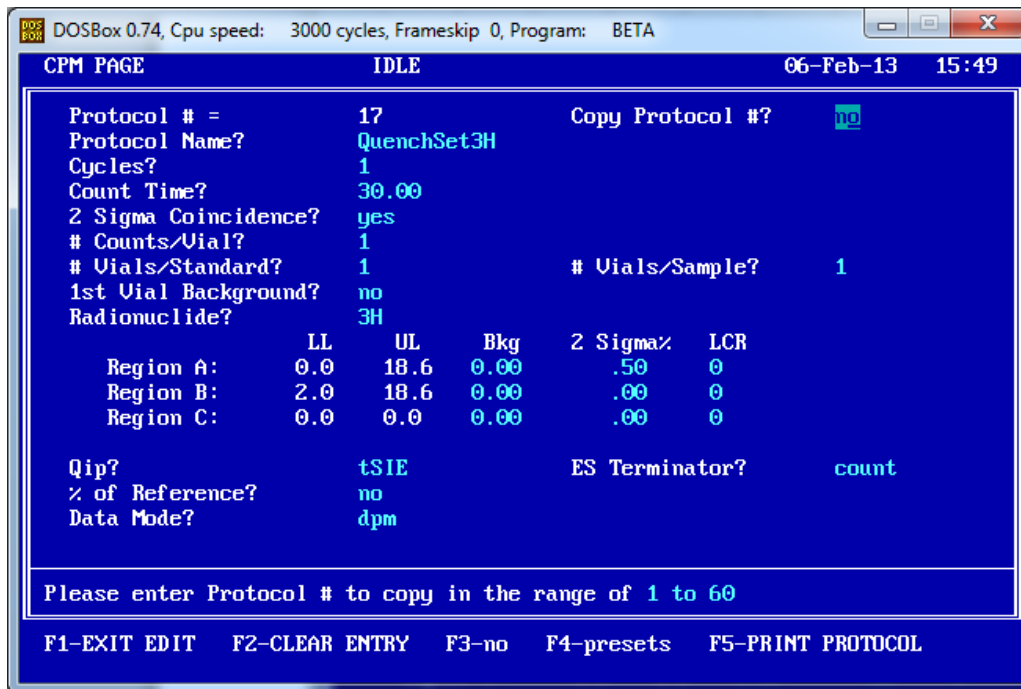


Fig 10

Use Page Down to go to the next page

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Page 2 - DPM Page

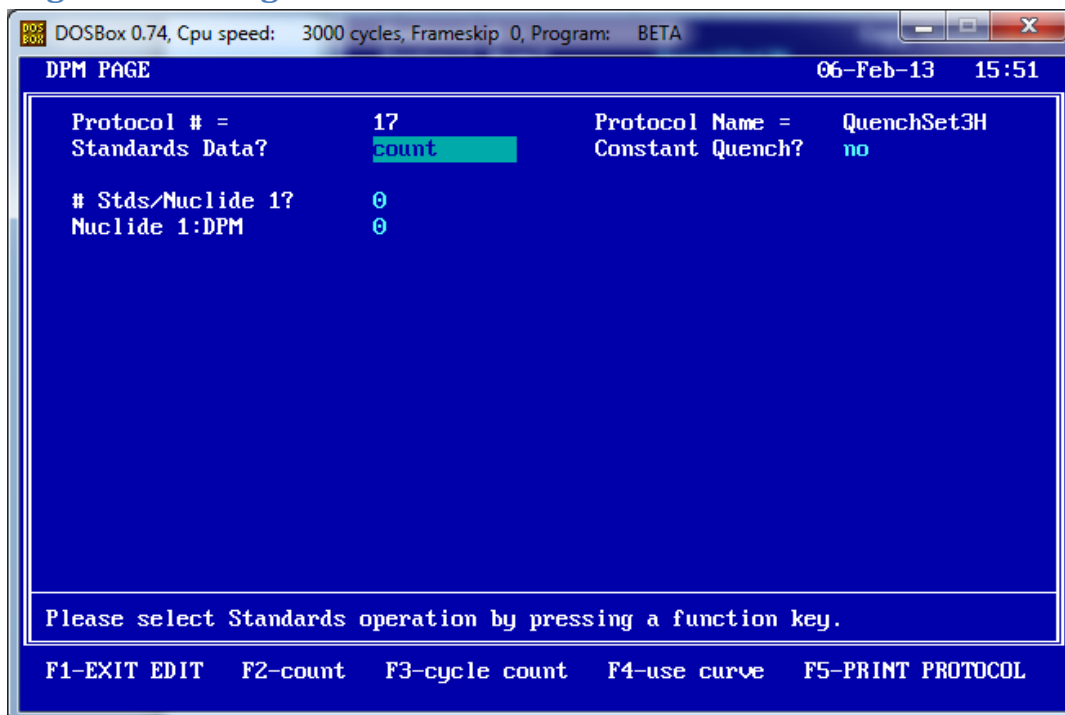


Fig 11

Leave the term *count* in Fig 11 as shown

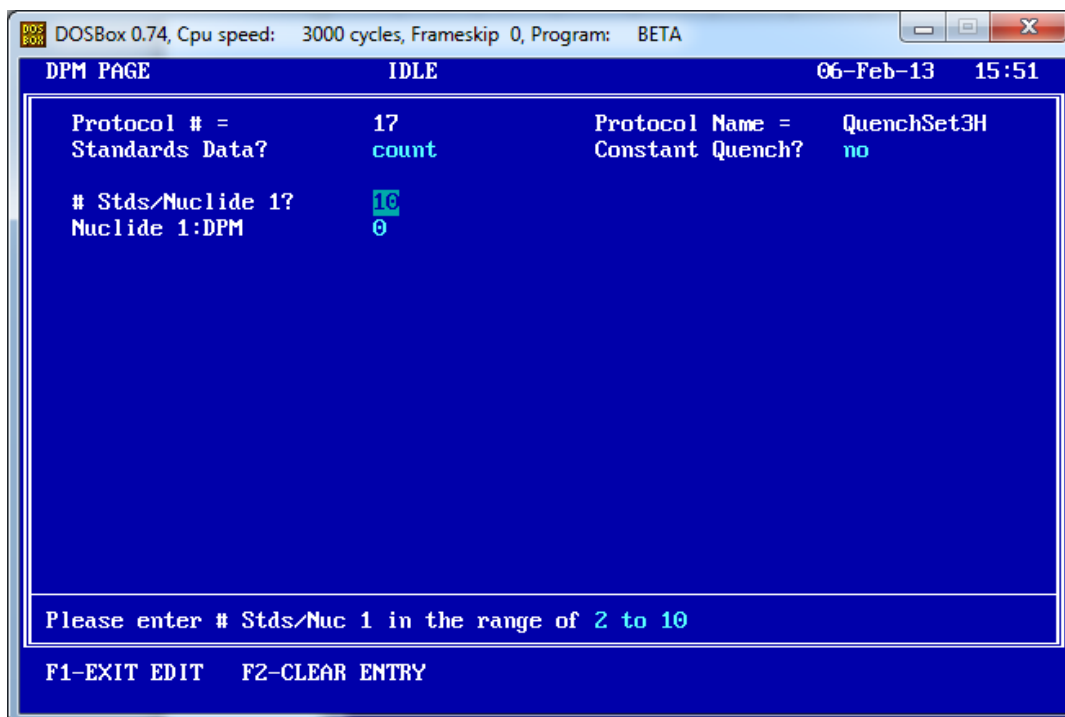


Fig 12

Enter through the Constant Quench (leave as *no*) and then in the #Stds/Nuclide 1 enter the value 10 (or the number of standards you have available) Fig 12



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In the Nuclide 1: DPM enter the value of the DPM in the standard. Please remember to correct for half-life with 3H. Fig 13

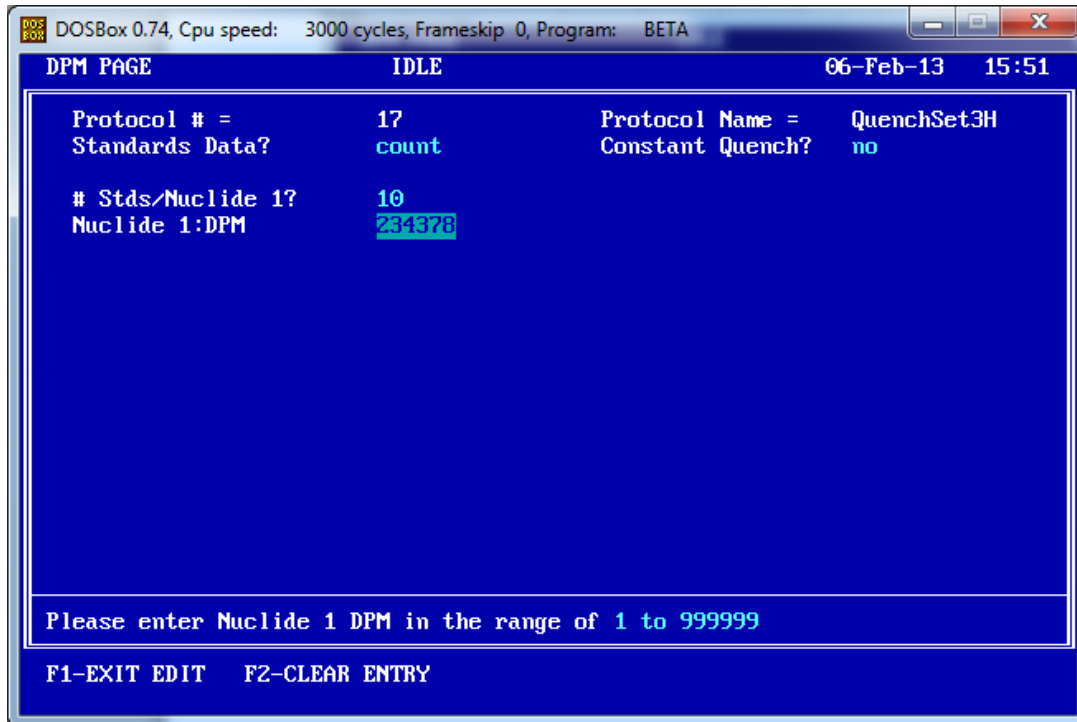


Fig 13

Press Page Down to get to the next screen

### Page 3 – Count Corrections Page

Fig 14 shows the page.

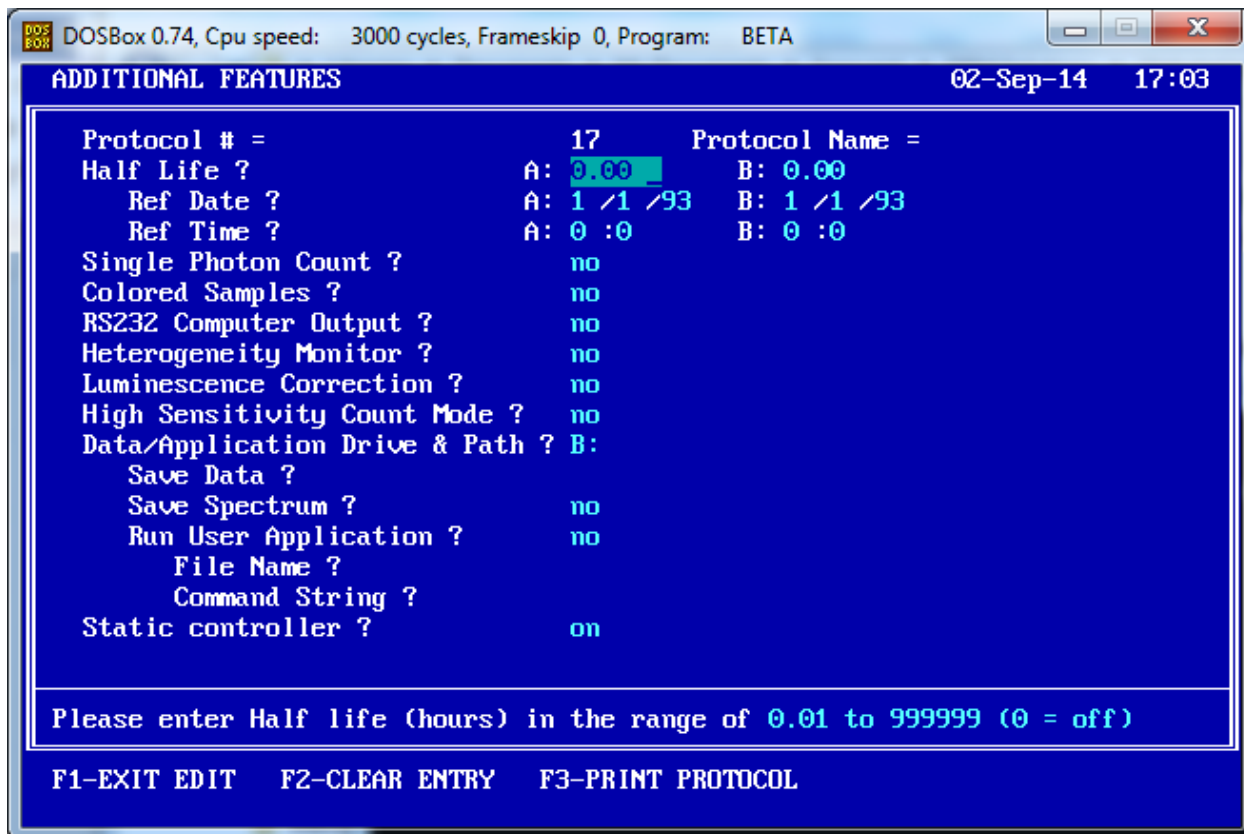


Fig 14

There is no need to change anything in this page

Page 4 - Printer Format Page

Fig 15 shows the Printer Format Page. Leave this page at the default settings

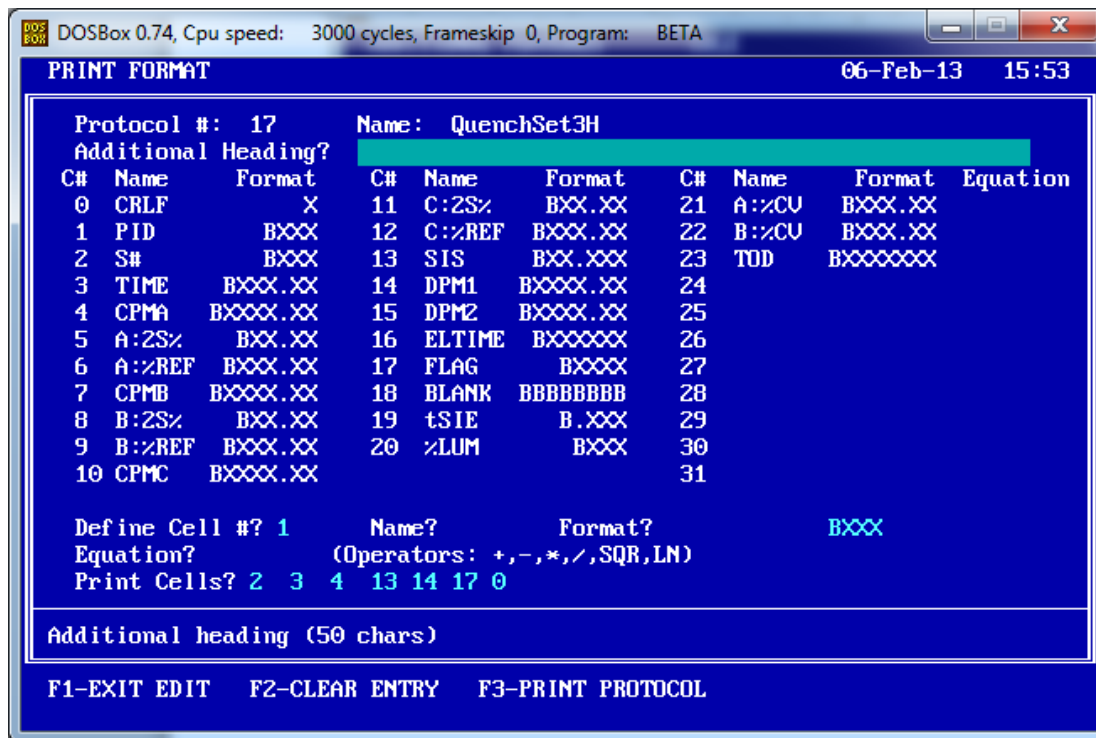


Fig 15

Press F1 to exit the protocol. The protocol saves automatically when you exit as shown in Fig 16

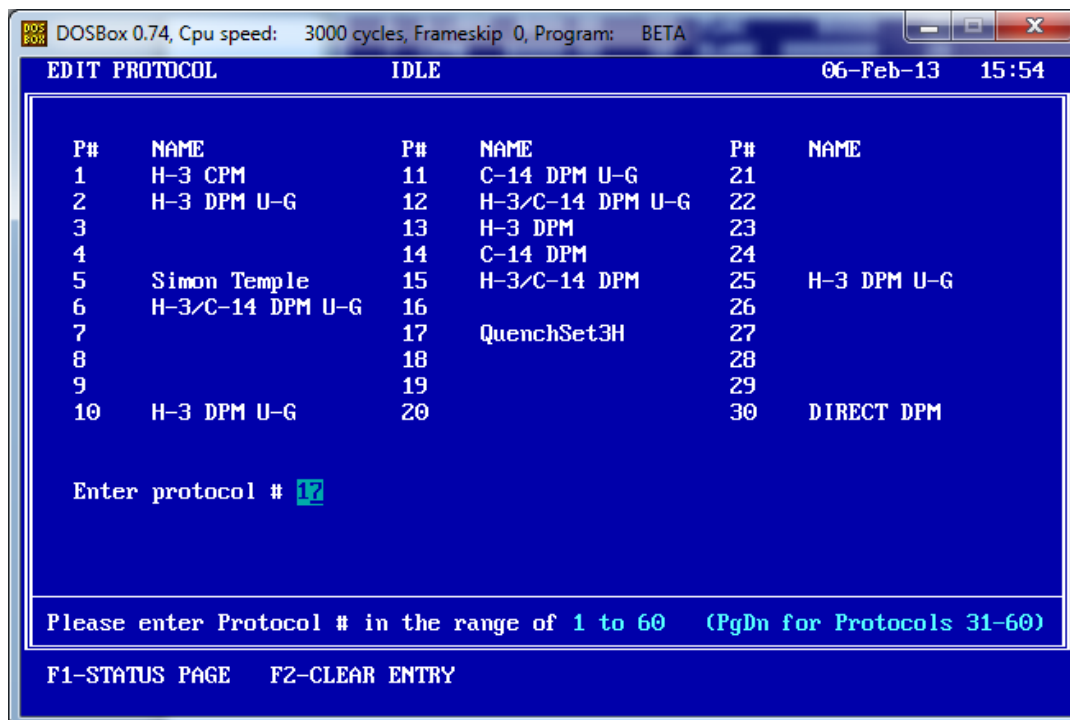


Fig 16

**Training in liquid scintillation and gamma counting**

Loading a quench correction curve in the 2100TR scintillation counter

Press F1 to go to the Status page

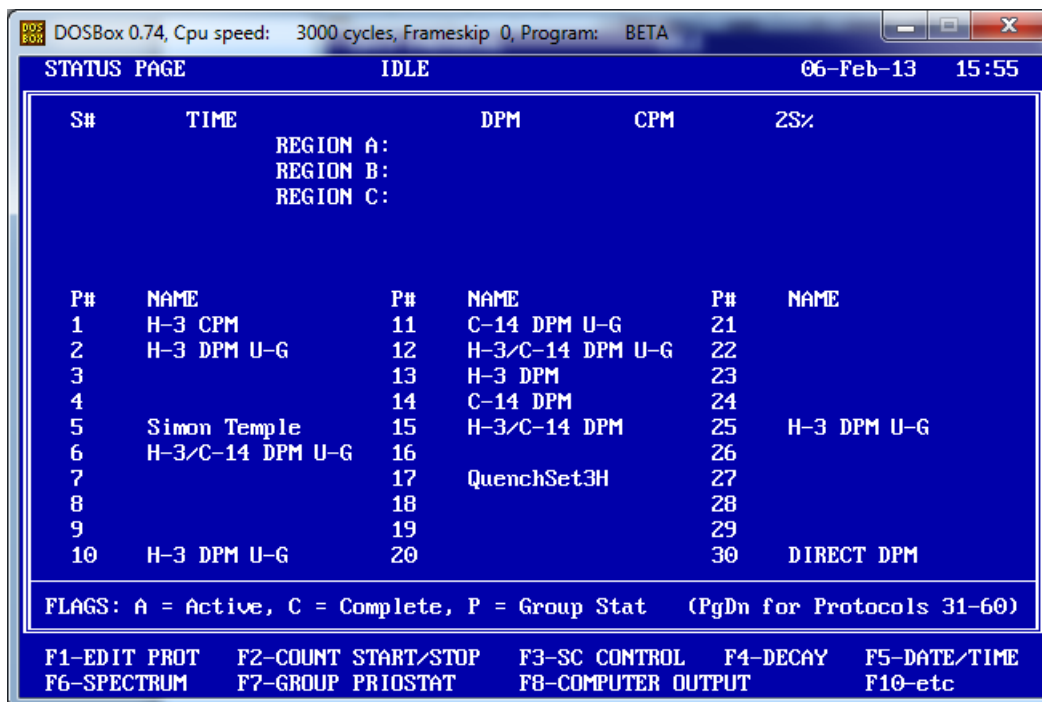


Fig 17

The Status Page Fig 17

Load the standards in the cassette (rack), put protocol flag 17 in the cassette and place in the counter. Press F2 and the counter will run and count the standards.

At the end of the run the counter will print out the quench curve.

## Quench Curve Data

Quench curve data after completion of the protocol

Now page 2 (which is called the DPM pag3) will look like this Fig 18

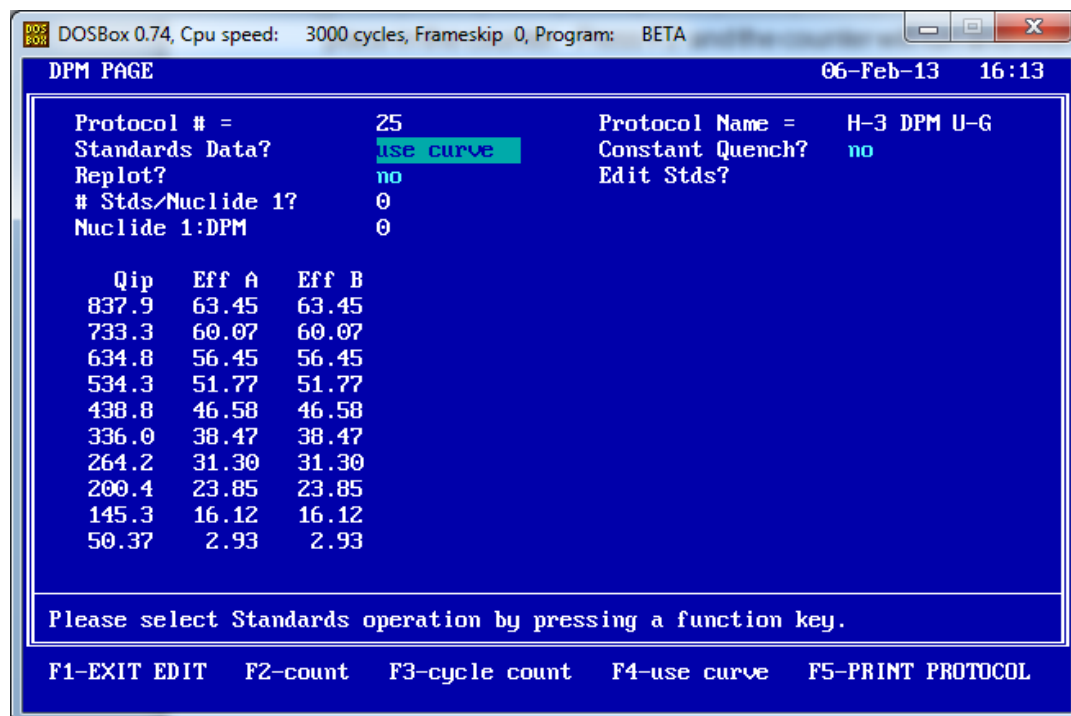


Fig 18

My suggestion is that you do not use the protocols where you have loaded the quench curves as user protocols. If you keep these you can copy the protocol and it will copy the quench data over. So if you have protocols 13 and 14 as 3H-UG and 14C-UG respectively and keep those just as the places where the quench curves are you can copy them to other protocols to use to do the everyday counting.

As you can see the quench curve is now shown where previously there was a blank space and the term "count" has been replaced by the words "use curve"

This protocol now has a quench curve and may be used or copied to other protocols for use in acquiring DPM from your samples