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Subject: Re: Chamber testing manual

Posted by [Harald Appelshaeuser](#) on Mon, 29 Nov 2004 18:47:08 GMT

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Dear Rainer,

the manual looks very good! I have a few questions and comments:

1.1 is the  $^{90}\text{Sr}$  source really needed for anything?

2. Chamber leakrate: the maximum allowed leak rate should be specified.

3. Chamber conditioning:

- I think the conditions need to be specified: flow rate, required  $\text{O}_2$  and  $\text{H}_2\text{O}$  purity. Is the full drift voltage applied?
- $\text{O}_2$  and  $\text{H}_2\text{O}$  content should enter the database.
- can you specify when the conditioning was successful? what is the maximum allowed dark current, at what voltages?

4. Gain uniformity:

- which radiation source should be used (and why)? If X-ray tube: which settings are recommended?
- Conditions: flow rate,  $\text{O}_2$  and  $\text{H}_2\text{O}$ ? With or without drift voltage? Important: which anode voltage (sag!)?
- Which level of non-uniformity can be tolerated (standard deviation, maximum deviation)?

5. Gain curve:

- at which flow rate,  $\text{O}_2$ ,  $\text{H}_2\text{O}$ ? Which source? Which drift voltage?
- what is the recommended  $\Delta V$  and  $V_{\text{max}}$ ?
- should an absolute gain measurement be performed for every chamber (how much effort is this)? Very important, but also in general: do we insist on a specific gas mixture?

Regards, Harry

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