Notes for Revision 2

All points raised by the reviewers have been addressed and marked up in red in the manuscript file. The following points required a statement (here below in blue):

Reviewer#2

Line 193: For large coarse grains Table 3 suggests that there is a (statistically insignificant) increase in dose rate with decreasing aliquot size for both the planar and closed ring source rather than a decrease as you suggest.
In the light of the additional information provided for the open-ring source (lines 70ff) the text here had to change. We now say that decreasing aliquot size increases the dose rate for all source types (line 197f).

Figure 4: The data point for F14_90 should be at ~1.04 rather than 1.08 following the correction to Table 4 noted above (I think you used the incorrectly calculated normalised % to plot Fig. 4).
I am not sure about this comment. For F14_90 the 1mm aliquots size value normalised to the 5mm value is 1.0778 derived from 0.1800/0.1670.

Line 254: By "the thicker the aliquot" I presume you mean "the larger the grain size". If so, I think the latter formulation is clearer.
No, we do indeed mean thickness. The text says: "...the smaller the aliquot, the larger the percentage of escaping secondary electrons. Furthermore, the thicker the aliquot, the smaller the percentage of secondary electrons escaping by the aliquot surface while the escape pathway via the edge remains the same."

Reviewer#1

l. 70: Please add here that the pre-selection of mini-sources occurs only for sources in the lexsyg research readers. The information that smart readers do not contain pre-selected sources appears only later in the text.
The text did actually say exactly this. I have re-phrased the sentence (line 69).
l. 75f.: It should read "source–sample distance". Additionally, for which grain size is this distance valid?
Thanks for pointing this out. 6.9 mm is the distance between source and surface of the sample holder – now clarified in line 74. The dose absorbed by a 240 µm grain is about 3.3% bigger than that absorbed by a 7 µm grain. This information is now added in the discussion about grain size (line 195f).

l. 181: The text describes a maximum difference of 26% between dose rates derived from various aliquot and grain sizes, but this value is not reflected by the ratio values shown in Table 4 (maximum variation of 21% in row 6 for 1 mm aliquots).
26% difference appears in Table 3 where the dose rate is normalised to the aliquot size, not to the grain size. This information is now added in the Table 3 header.

l. 194f.: The same seems to be true not only for the planar source, but also for the closed ring source (see Fig. 4).
Thanks for pointing this out. In the light of the additional information provided for the open-ring source (lines 70ff) the text here had to change. We now say that decreasing aliquot size increases the dose rate for all source types (lines 193ff).

l. 222: Please indicate that this sentence refers to experimental data. Considering the previous sentence, this is not very clear.
Thanks for pointing this out. Also here the text had to change in the light of the additional information provided for the open-ring source (lines 70ff). We now say that also the homogeneity of the source is reflected in the experimental data.