Dear Contributor,

Thank you for participating in the public consultation of the ICNIRP draft guidelines.

Please note that it is important that ICNIRP understands exactly the points that you are making. To facilitate our task and avoid misunderstandings, please:

* be concise
* be precise
* provide supporting evidence (reference to publication, etc.) if available and helpful.

**How to complete the comments table:**

Please use 1 row per comment. If required, please add extra rows to the table.

This response document asks you to provide your ‘comment’, your ‘proposed change’, and the ‘context’ to this comment and proposed change. What is meant by these is the following:

**Comment :** A brief statement describing the issue that you have identified (and that you would like ICNIRP to take into account in the final version of the guidelines).

**Proposed Change:** A brief statement describing how you would like the document changed to account for this issue.

**Context:** A brief statement identifying relevant documents in support of your comment and proposed change.

**Please, provide your details below as per the online form and the provision of the privacy policy**

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| --- | --- | --- |
| Last name, first name: Überbacher, Richard | Email address: Your email address. | Affiliation (if relevant): Seibersdorf Laboratories, LE/EMC and Optics |
| If you are providing these comments officially **on behalf** of an organization/company, please name this here: organization/company | | |
| ☒ I hereby agree that, for the purpose of transparency, **my identity (last and first names, affiliation and organization where relevant) will be displayed** on the ICNIRP website after the consultation phase along with my comments.  ☐ I want my comments to be displayed anonymously. | | |

|  | **Document**  **(Guidelines, App A,**  **App B)** | **Line Number**  **#** | **Type of comment (General/ Technical/ Editorial)** | **Comment. Proposed change. Context.** |
| --- | --- | --- | --- | --- |
| **1** | Appendix A | 622-625 | General | Comment:  In my investigations (presented at BioEM 2018, Piran-Portoroz, Slovenia; see reference [1]) with an anatomically more realistic skin modeling for children, -segmented as a thinner layer compared to those of adults, I found for the 5 year old girl *"Roberta"* an maximum exceeding of 48.3% of the whole-body SAR (gen.pub.). For the standard-segmentation type of the skin derived from values for adults (-as done for the whole Virtual Population v1.0) the maximum exceeding found for *"Roberta"* was 36.7% (gen.pub.). Therefore a adapted thinner skin layer for children pushes up the whole-body SAR by additionally +11.6%, compared to (a typical) skin layer thickness with values taken from adults.  Proposed change/supplement in line 625: after "...whole body average SAR.":  The effect of an enhanced (and anatomically more realistic ) thinner skin layer for children (compared to the previous taken from adults) in the segmentation process was investigated by Überbacher et al. (2018) [1]. For the 5 year old girl *"Roberta"* the author reported for a thinner modeled skin an exceeding of the gen.pub. limits of **48.3%**, instead of **36.7%** for the former standard-thickness derived from adults (that was applied to the entire Virtual Population v1.0). This finding with an additional impact of **+11.6%** leads to the conclusion, that former presented SAR values for children (e.g. Bakker et al.,2010) have to be revised, and in a first step an additional uncertainty (in direction to higher whole-body SAR values) due to the restricted segmentation accuracy of the skin is recommended.  [1] Überbacher R, Cecil S. Influence of Anatomical Skin Thickness of Children on the Whole-Body SAR for Future 5G-Frequencies. BioEM-2018, Piran-Portoroz, Slovenia, (June 25 - 29), Abstract Book pp. 406-409, 2018  Context: Difference in the anatomical accuracy of segmentation of the skin; impact on the whole-body SAR |
| **2** | Document ? | Line number | Type of comment | Insert your comment.  Insertyourproposedchange.  Explain the context of your comment. |
| **3** | Document ? | Line number | Type of comment | Insert your comment.  Insertyourproposedchange.  Explain the context of your comment. |
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