

## APPENDIX E: SAR TISSUE SPECIFICATIONS

### Measurement Procedure for Tissue verification:

- 1) The network analyzer and probe system was configured and calibrated.
- 2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
- 3) The complex admittance with respect to the probe aperture was measured
- 4) The complex relative permittivity  $\epsilon'$  can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

where  $Y$  is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively,  $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$ ,  $\omega$  is the angular frequency, and  $j = \sqrt{-1}$ .

### 3 Composition / Information on ingredients

#### 3.2 Mixtures

**Description:** Aqueous solution with surfactants and inhibitors

**Declarable, or hazardous components:**

CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28-0000	<b>Ethanedial</b> STOT RE 2, H373; Acute Tox. 4, H302	>1.0-4.9%
CAS: 68608-26-4 EINECS: 271-781-5 Reg.nr.: 01-2119527859-22-0000	<b>Sodium petroleum sulfonate</b> Eye Irrit. 2, H319	< 2.9%
CAS: 107-41-5 EINECS: 203-489-0 Reg.nr.: 01-2119539582-35-0000	<b>Hexylene Glycol / 2-Methyl-pentane-2,4-diol</b> Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.9%
CAS: 68920-66-1 NLP: 500-236-9 Reg.nr.: 01-2119489407-26-0000	<b>Alkoxyated alcohol, &gt; C<sub>16</sub></b> Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.0%

**Additional information:**

For the wording of the listed risk phrases refer to section 16.

Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential.

The specific chemical identity and/or exact percentage concentration of proprietary components is withheld as a trade secret.

**Figure E-1**

Note: Liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

<b>FCC ID:</b> A3LSMF721JPN	<b>FCC URS (UNINTENTIONAL RADIATOR RF SOURCES) RF EXPOSURE EVALUATION</b>	<b>Approved by:</b> Technical Manager
<b>DUT Type:</b> Portable Handset		APPENDIX E Page 1 of 2

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### Measurement Certificate / Material Test

Item Name	Body Tissue Simulating Liquid (MBBL600-6000V6)
Product No.	SL AAM U16 BC (Batch: 210621-3)
Manufacturer	SPEAG

### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

### Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

### Test Condition

Ambient Condition 22°C ; 30% humidity  
TSL Temperature 22°C  
Test Date 23-Jun-21  
Operator WM

### Additional Information

TSL Density  
TSL Heat-capacity

### Results

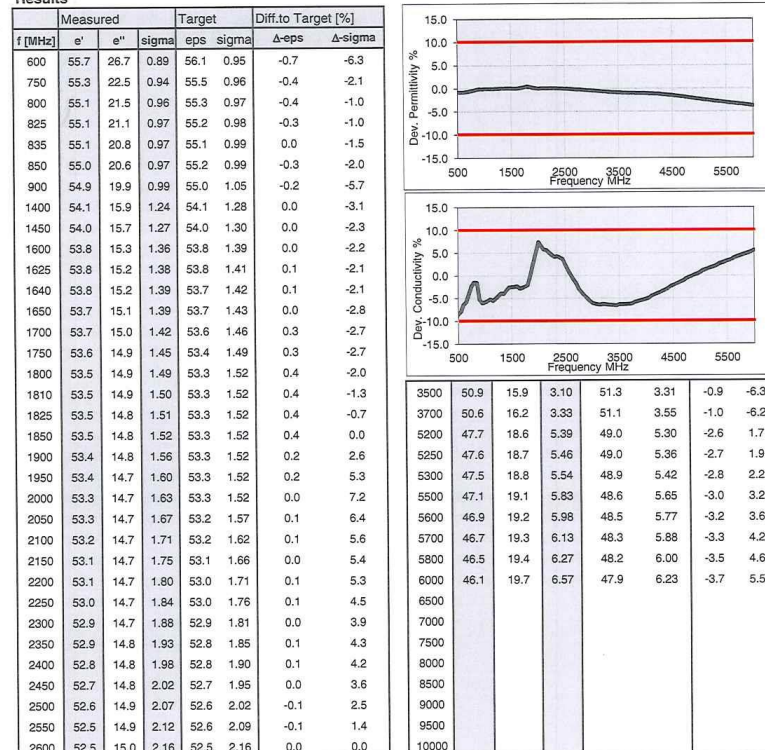


Figure E-2: Body Tissue Equivalent Matter

FCC ID: A3LSMF721JPN	FCC URS (UNINTENTIONAL RADIATOR RF SOURCES) RF EXPOSURE EVALUATION	Approved by: Technical Manager
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