

Annex 1 – Conditionally Amended Claims

1. A soft tissue body implant comprising a synthetic implant material comprising an irregular textured surface having superimposed macro-roughness and micro-roughness features, the surface having a mean surface roughness Sa value of a) from ~~41~~ μm to ~~820~~ μm at an area scale of 1 mm x 1 mm and b) from 0.1 μm to 5 μm at an area scale of 90 μm x 90 μm , and optionally a mean surface roughness Sa value of:

b) from 0.1 μm to 5 μm at an area scale of 90 μm x 90 μm ; and/or

c) from 10 nm to 1 μm at an area scale of 10 μm x 10 μm ; and/or

d) from 2 nm to 15 nm at an area scale of 1 μm x 1 μm ;

wherein the surface comprises a biocompatible polymer; and

wherein the implant material forms at least part of the surface layer of the implant, wherein the implant is a prosthetic implant, which is a breast implant.

~~2. An implant according to claim 1, wherein the implant material has a mean surface roughness Sa value of:~~

~~a) from 4 μm to 8 μm at an area scale of 1 mm x 1 mm; and~~

~~b) from 0.1 μm to 0.9 μm at an area scale of 90 μm x 90 μm ; and~~

~~c) from 10 nm to 200 nm at an area scale of 10 μm x 10 μm .~~

~~3. An implant according to claim 1 or 2 having a mean surface roughness Sa value of from 2 nm to 15 nm at an area scale of 1 μm x 1 μm .~~

~~4. An implant according to any one of the previous claims wherein the surface at the respective areas scales has a mean surface skewness Ssk value of:~~

~~a) from -1.0 to +1.0, preferably about zero, at an area scale of 1 mm x 1 mm; and/or~~

~~b) from -1.0 to +1.0, preferably about zero, at an area scale of 90 μm x 90 μm ; and/or~~

~~c) from -0.7 to +0.7, preferably about zero, at an area scale of 10 μm x 10 μm .~~

~~5. An implant according to any one of the previous claims wherein the surface is substantially free of peaks and troughs which deviate significantly from the mean surface height roughness Sa value at the respective areas scale, optionally wherein the surface is substantially free of peaks or troughs which deviate from the mean surface height roughness Sa value by more than 200% of the mean surface height value at the respective area scales.~~

6. — ~~An implant according to any one of the previous claims wherein the surface has a mean excess kurtosis value (S_{ku} minus 3) of:~~

- ~~a) from -1.0 to +1.0, preferably about zero, at an area scale of 1 mm x 1 mm; and/or~~
- ~~b) from -1.0 to +1.0, preferably about zero, at an area scale of 90 μ m x 90 μ m; and/or~~
- ~~c) from -1.0 to +1.0, preferably about zero, at an area scale of 10 μ m x 10 μ m.~~

7. — ~~An implant according to any one of the previous claims wherein the surface has a maximum peak height to trough depth S_z value of from 10 μ m to 80 μ m at an area scale of 1 mm x 1 mm.~~

8. — ~~An implant according to any one of the previous claims wherein the surface has a maximum peak height to trough depth S_z value of:~~

- ~~a) from 10 μ m to 60 μ m at an area scale of 1 mm x 1 mm; and/or~~
- ~~b) from 1 μ m to 10 μ m, optionally 2 μ m to 7 μ m at an area scale of 90 μ m x 90 μ m; and/or~~
- ~~c) from 0.1 μ m to 1.5 μ m, optionally 0.2 μ m to 1 μ m at an area scale of 10 μ m x 10 μ m.~~

9. — ~~An implant according to any one of the previous claims wherein the surface has a fractal dimension at the respective area scale of from 2.2 to 2.4.~~

10. — ~~An implant according to any one of the previous claims wherein the surface comprises an organosilicon polymer, optionally a silicone, optionally polydimethylsiloxane, and/or wherein the implant material forms at least part of the surface layer of a prosthetic implant, optionally a breast implant.~~

11. — ~~An implant according to any one of the previous claims, wherein the surface is free from open cell textures.~~

12. — ~~An implant according to any one of the previous claims, wherein the surface is a biomimetic textured surface.~~

13. — ~~An implant according to any one of the previous claims, the implant being a prosthetic implant, optionally a breast implant.~~

~~142.~~ A template for use in preparing an implant according to ~~any one of the previous~~ claim ~~1s~~, said template having a textured surface as described according to ~~any one of the previous claims~~ claim 1, or a negative of a textured surface as described according to ~~claim~~any one of the previous claims, optionally wherein the template is a mould or stamp.

~~153.~~ A method of preparing an implant according to ~~any one of the previous claims~~ claim 1, the method comprising the step of preparing the implant material surface by etching, stamping, or moulding.