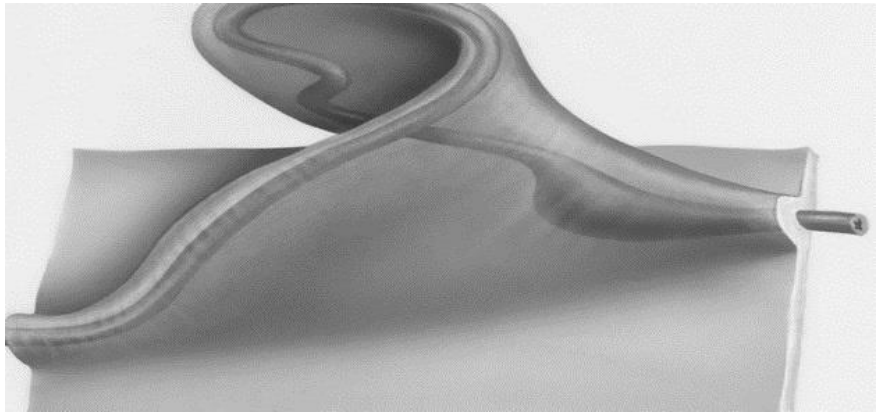
Technology Offer CSIC/AZ/004

Polymeric material for biological tissue simulation (Phantom)



The invention relates to the use of a composite material comprising a polymer matrix and micronized rubber powder, preferably obtained from recycled end-of-life tires, as an artificial human tissue or organ. Of interest in medicine and for waste-management industries.

Intellectual Property

PCT application filed

Stage of development

Technology and components validated in the laboratory.

Intended Collaboration

Licensing and/or co-development

Contact

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Market need

In human research, it's essential to have artificial human tissues or organs, also called 'Phantoms', which can be used to enable advances in therapeutic and diagnostic ultrasound strategies. Phantoms are needed to develop and test new ultrasound techniques, both for diagnostic imaging and treatment, training of specialists, calibration of equipment, among others.

CSIC solution

Material composed of a polymeric matrix and micronised rubber powder that faithfully reproduces the ultrasonic properties of human tissues or organs. In addition, it can reproduce the geometry, shape and texture of tissues, favouring ultrasound scanning.

This material is cost-effective, stable and mouldable.

Competitive advantages

- Low cost, stable and easy to mould material to replicate complex anatomical structures.
- It facilitates advances in ultrasound diagnostic and therapeutic strategies.