How S’pore’s first Tooth Tissue Bank is advancing dental research.

Singapore’s first Tooth Tissue Bank was set up in 2021 to support research on teeth for various purposes, including developing more resilient filling materials and using stem cells to regenerate nerves and blood vessels in teeth. Here is a peek into what goes on behind the scenes.

**Fangs for Donating**

Singapore’s first Tooth Tissue Bank

is aimed at collecting teeth from donors to support research and development in the field of dentistry. The bank operates under the National University of Singapore (NUS) Faculty of Dentistry’s National University Centre for Oral Health Singapore (NUCOHS).

The Tooth Tissue Bank was established in 2021 at the NUS Faculty of Dentistry.

**The Process**

1. **Collection:** Teeth are collected from donors who have agreed to donate their teeth for research purposes. The donor must be over the age of 18 and must have signed a consent form.

2. **Processing:** Once the teeth are collected, they are processed to remove any soft tissues and debris. The teeth are then placed in a solution containing highly purified water. The test tubes are then placed in a box and transported to the Tooth Tissue Bank.

3. **Cleaning:** The teeth are cleaned at the biosafety cabinet. A test tube with highly purified water is placed in the box.

4. **Trimming:** The edges are then trimmed so that the tooth is cut down to a few millimetres. This is done by simulating the biting action, which will cause the filling to fall off.

5. **Preparation:** The teeth are then prepared for further processing. The teeth are cut into slices using a laser beam to be used as specimens for research.

6. **Laser cutting:** A laser beam is used to cut the teeth into slices for research. The laser is set at the correct angle to cut through the tooth accurately.

7. **Cleaning:** Any unexpected vibration during the cutting process is avoided to ensure the integrity of the specimens.

8. **Continuation:** The process continues until all the teeth have been cut into slices for research.

9. **Transport:** The slices are then placed in a box and transported to the Tooth Tissue Bank.

10. **Storage:** The slices are then stored in a box and transported to the Tooth Tissue Bank.

11. **Ongoing research:** The Tooth Tissue Bank is a place where teeth can be stored and used for research.

**Results**

The Tooth Tissue Bank is a valuable resource for researchers in the field of dentistry. It allows for the development of new materials and techniques that can improve the health and function of teeth.

**Conclusion**

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**Further reading:**

1. [NRUH's Tooth Tissue Bank](https://www.nruh.edu.sg)
2. [National University Centre for Oral Health Singapore (NUCOHS)](https://www.nus.edu.sg)
3. [Tooth Tissue Bank](https://www.toothtissuebank.com)

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