

Group 1160

**Solidification of Eutectic Alloys under Microgravity
Tampere University of Technology (TUT), Finland**



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Tampere and TUT:

We come from Tampere. Tampere region has population 430,000 and is the country's second largest regional centre after the Greater Helsinki Area. The city itself is situated on the Tammerkoski Rapids between two large lakes, the distance from Helsinki being some 180 kilometres.

Our university has got about 9000 students and is conducts basic and applied research and product development in the field of technology. TUT is known as the University for Industry, flexibly connecting expertise in different fields of technology and economics. Research is carried out in close contact with industry.

Our experiment:

The aim of our experiment is to produce samples of eutectic and other alloys under microgravity conditions and later to investigate the differences in materials that are solidificated under microgravity to the ones solidificated on the ground.

In normal gravity buoyancy-driven convection disturbs the process of solidification and in microgravity the almost complete lack of this effect is expected to produce a different kind of structure compared to the ones produced under gravity. After producing the samples we are going to do electron microscopy research at our university.

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