

Cryobiology

ONPRC Saturday Academy Part 3



OREGON NATIONAL
PRIMATE
Research Center



<http://www.ars.usda.gov/News/docs.htm?docid=15744&page=2>



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Vitrification in Everyday Life

Example 1: Cotton candy

When sucrose is cooled slowly, the result is crystal sugar (or rock candy), but, when cooled rapidly, the result is syrupy and airy spun cotton candy which can be collected on a paper cone.



Example 2: Old Ice Cream

Old ice cream may be less appetizing because of the formation of large ice crystals as a result of devitrification.



http://commons.wikimedia.org/wiki/File:Rock_Candy.jpg
http://en.wikipedia.org/wiki/GNU_Free_Documentation_License No changes were made.

http://commons.wikimedia.org/wiki/File:Spinning_head_of_the_cotton_candy_maker.jpg

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No changes were made.

Use of Cryopreservation with Endangered Species



Black- Footed Ferrets

Cryobiology helped the National Zoo scientists breed black-footed ferrets, once thought to be extinct.

Photo: Mehgan Murphy/NZP
<http://nationalzoo.si.edu/publications/zoogoer/2010/1/FrozenAssets.cfm>