

Introduction:

Revealing the detailed layered structure in otoliths requires precision techniques enabling the sectioning of the delicate material. Development of an efficient sample preparation, that can produce multiple samples needed for the examination also includes automated multicutting of planeparallel samples with high precision. A suitable cutting process gives a good starting point for the following grinding and polishing steps, as difficulties in handling non-plane samples are eliminated.



Material Name: Otolithes

Sample comments: The sample block with otolithes was mounted in poly styrene with black color dye.

Modification of the software is done - possibility of larger x-inc steps in multicut mode.

New demonstration of A-100 with modified software - version 1.08 was done 2/11-2015. In this demo the otolithes were mounted in Epofix.

Developed by: Birgitte Nielsen

Date: 21-08-2015

Cutting

Equipment: Accutom-100

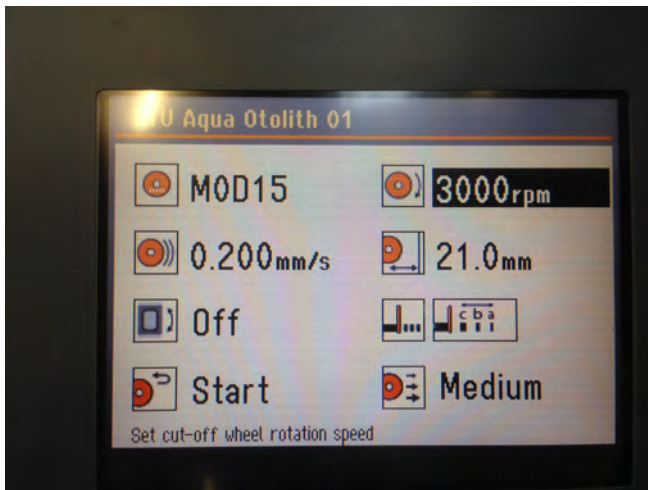
Cut-off wheel: MOD15

Feed rate: 0.200

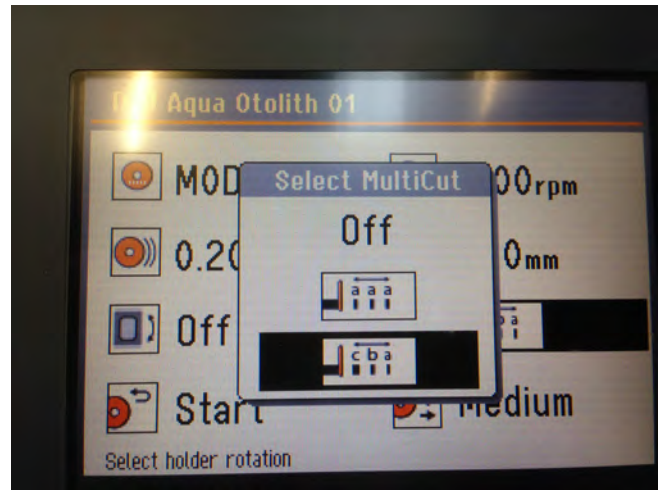
Comments: The clamped flat sample-block is angled just a little bit, so the cut slice will "stay" on the block (in one corner). This is to minimize the risk of breaking the very thin slice when it drops down or "fly around" in the cutting chamber.

For cutting details/setup - see images next page.

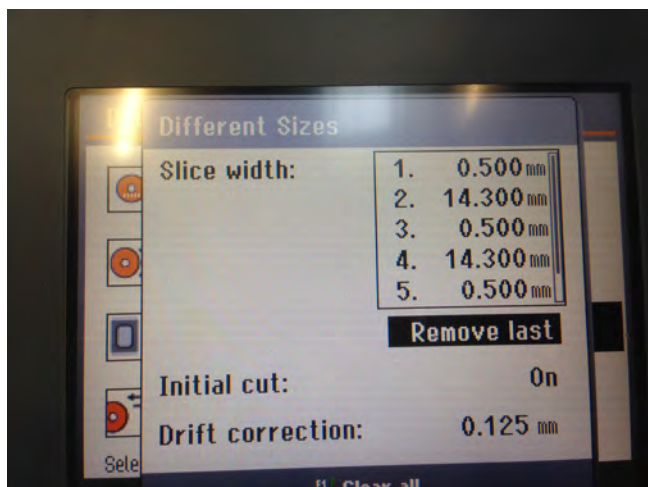




1 - Method overview



2 - MultiCut mode



3 - Slide width, multicut setup



4 - Clamping setup

Date: 04-11-2015

Summary:

An efficient multicutting method is developed with focus on efficient and reproducible sectioning of samples. From mounted rows of otoliths planeparallel samples of ~14 mm are cut by multicutting eliminating the risk of displacing the samples during reclamping.

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