

**NEW DEVELOPMENT FOR THE AUTOMATION OF BORATE FUSION  
SAMPLE PREPARATION FOR XRF**

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It is often overlooked that weighing is an important source of error in the borate fusion-XRF analytical process. In fact, a weighing error of less than a milligram for the sample can have a significant effect on the measured concentration of major oxides such as calcia in cement and iron oxide in ores. Moreover, accurately weighing flux and sample can account for more than 60% of the total technician time invested in fused bead preparation. The automation of weighing for borate fusion can be the solution both to improve the consistency of results and to free technician resources from repetitive tasks.

Corporation Scientifique Claisse will introduce the first step of its automation project for borate fusion, rFUSION. The rFUSION Automated Weighing System is capable of achieving the accuracy and precision required for the fusion technique 24/7/365 without human intervention. The modular approach of rFUSION allows ease of use and simplicity of maintenance. The same approach will also make automation affordable for more laboratories by allowing an upgrade path to configure the system step by step, module by module. During the presentation, we will explain the rFUSION automation approach and describe the specifications of the weighing system and their benefits.