



Corporation Scientifique Claisse Inc.

This company was formed as a happy ending of a long story which started in 1956. After a few years of research in the X-Ray fluorescence field, Fernand Claisse developed the now well-known "Borate Fusion Disk Technique", a sample preparation technique that overcomes all the uncontrollable factors that limit the accuracy in X-Ray fluorescence analysis, up to the point that the latter now competes with best quality chemical analysis. In 1972, Claisse designed a fusion apparatus, the Claisse Fluxer, to apply the borate fusion technique to routine industrial analysis. Ever since the Fluxer is being continuously improved in quality and capability. It now transforms solid samples into borate glass disks for use in X-Ray fluorescence analysis and into solutions for use in atomic absorption analysis, plasma spectroscopy analysis and classical wet chemical analysis. It can also be adapted to the preparation of NaF pellets for analysis of uranium by optical fluorescence.

The Corporation Scientifique Claisse Inc. was formed in 1976 to design, manufacture, sell and export the various models of Claisse Fluxers all over the world and eventually other kinds of laboratory and scientific equipment. Fabrication is done by subcontracts to associated companies that work for Corporation Scientifique Claisse only. One of the objectives of the Corporation Scientifique Claisse is excellence so that its main interest lies in instruments that are unique or that do jobs better than other instruments. As a consequence, they wish to receive proposals from innovators with new ideas and from manufacturers offering good products who do not want to be involved themselves with exportations.

The Corporation Scientifique Claisse participates in seminars, summer schools workshops and scientific exhibitions in America and in Europe and is ready to extend that participation to other countries when opportunities occur.

CORPORATION SCIENTIFIQUE CLAISSE INC.

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Exportation interest: about 95% of production is exported in more than 35 countries

THE CLAISSE FLUXER

The Claisse Fluxer is an apparatus that transforms inorganic samples into glass disks or solutions. It applies the "Borate Fusion Technique" which consists in a) mixing the sample with a flux such as Li or Na tetraborate or metaborate, b) heating the mixture in a Platinum alloy crucible over a gas flame at about 1100°C, c) casting the hot molten material into a Platinum alloy mould to make glass disks or into an acid to prepare solutions, and d) cooling the disks or agitating the acid to end up with solid transparent disks or clear cool solutions.

One to six samples can be prepared simultaneously and the whole process takes only 10 to 15 minutes. This technique of sample preparation has been successfully applied to the analysis of nearly all elements in numerous materials such as rocks, ores, cements, sediments, ashes, bauxites, slags, ceramics, refractories, rare earths, etc. The only materials that need preoxidation before fusion are organic materials, alloys, carbides nitrides and sulfides.

The Claisse Fluxer offers many advantages over other sample preparation techniques:

- a) **speed:** six samples are processed in less than 15 minutes
- b) **simplicity:** the process is fully automatic
- c) **reproducibility:** errors associated with the fusion procedure are almost undetectable
- d) **accuracy:** total elimination of particule size effects in X-Ray fluorescence analysis results in accuracy similar to best chemical analysis
- e) **economy:** lesser handling of platinum ware increases the life of the latter and decreases the cost per analysis
- f) **servicing:** the design of the Fluxer is so simple that no qualified personnel is required for servicing

SERVICE TO CUSTOMERS

Another aspect of the excellence aimed by the Corporation Scientifique Claisse is the service offered to customers and extended to potential customers as well. The company informs potential customers of existing cheaper alternative techniques when it is in the interest of the customers. It also offers free consultation service in the general field of analysis including applications to various materials, technical advice and scientific information. The president of the company is personally involved in research in the X-Ray fluorescence field and is one of the authors of the recent book "Principle of Quantitative X-Ray Fluorescence Analysis" (Heydon & Son, 1982). The company also publish monographs in the field of application of his instruments.