

Binder

In most cases, a binder is required for the preparation of pressed pellets for XRF. Boric acid is one of the traditional materials used as a binder or backing material. However, this is classified by REACH as being toxic. Based on this health issue, boric acid is no longer considered to be an appropriate material for this application. FLUXANA now offers **BOREOX®**; a direct replacement. This is a harmless organic material that shows excellent binding properties and high resistance to x-rays. It is particularly good when used as a backing material.

Alternatively, **CEREOX®** can be used. CEREOX® is comprised of a wax, previously known as Hoechst wax. This material is clean and very resistant to x-rays. Mixed with a sample (1 part wax to 4 parts sample), CEREOX® forms a perfect pellet with any material.

CELLEOX® is a cellulose based binder. The binding properties are not as good as BOREOX® and CEREOX®. Therefore, it is mainly used as a grinding aid but it is also available as grinding aid tablets. A particular property is the adsorption of liquids so it can be used, mixed with aggressive liquids, for analysis in a sample cup.

Sample and binder must be mixed homogeneously. FLUXANA recommends their automatic mixer (MU-K-Mixer)



Customer feedback for the use of the new BOREOX® backing material:

"...it gives very good pressed pellets. Earlier with Boric acid, we used Al-cups, but that is no longer necessary anymore due to the very good and strong pellet that we get with Boreox. I can also inform you that Boreox is much better as a background for our XRD samples than boric acid. As you may know, boric acid results in big peaks using XRD and, as we run XRD in vacuum, we must use a pressed sample for powders."

DEGERFORS LABORATORIUM AB,
Ingvar Bernhardsson, Sweden

Item No.	Description	Quantity
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Binders

BM-0002	CEREOX® * (Licowax C, Hoechst wax) for XRF	0.25 / 5 / 20 kg
BM-0003	CELLEOX® Cellulose powder for XRF	0.25 / 20 kg
BM-0008	BOREOX® (replacement for boric acid) for XRF	0.25 / 5 / 20 kg

Grinding aid tablets

BM-0003-1K	CELLEOX® grinding aid tablets 0.33 g each	1 kg
BM-0003-5K	CELLEOX® grinding aid tablets 0.33 g each	5 kg
BM-0003-20K	CELLEOX® grinding aid tablets 0.33 g each	20 kg





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