

## LOW RADIOACTIVE AMMONIUM ACETATE FLUX

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The background event is a critical indicator, in all low background experiments. With the rate of signal events of detector, it is crucial to minimize the presence of radioactive isotopes. Solder and flux is one of the essential materials for making reliable electrical connections in sensitive parts of the experiment. Literature dates report a problem with unacceptable radioactive contamination of commercially available fluxes.

In this work we continued to analyze the low-background flux problem and to produce  $\text{CH}_3\text{COONH}_4$  organic flux from pre-purified materials. The main application of the flux is for EDELWEISS and CUPID-Mo experiments, which use bolometric technique in LSM underground laboratory for direct Dark Matter detection and for  $0\nu 2\beta$  search, respectively. An instrumental neutron activation analysis (INAA), Inductively Coupled Plasma Emission Spectrometry (ICP-AES) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) have been performed to estimate the radioactivity level and impurity content of the products. Additionally, the composition of a high purity commercial ammonium acetate flux ( $\text{CH}_3\text{COONH}_4$  OSCh 5-4) was analyzed by the same methods to assess the purity of the « custom-made » ammonium flux. The concentration of all impurities in commercial ammonium flux is more significant than custom-made analog. These dates report the advantage of synthesis method of custom-made flux.

### The speaker is a student or young scientist

Yes

### Section

1. Neutrino physics and nuclear astrophysics

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**Session Classification:** Poster session