

## NEUTRON ACTIVATION SERVICE

Neutron activation analysis provides the life science community with capabilities not readily available with other assay technologies. Neutron activation is known for its excellent sensitivity and elemental specificity for the simultaneous measurement of trace elements. This offers the potential of measuring multiple isotopic tracers per assay. Unlike optical lasers, neutrons can penetrate solid tissue and opaque-liquid samples, thereby providing an assay that is completely self-contained requiring minimal sample preparation. Unlike other element detection methods, such as MR imaging or atomic absorption spectrophotometry, stable-isotope labeling and neutron activation can measure multiple labels simultaneously. Therefore, samples can be archived and re-assayed if questions arise.

BioPAL offers several different stable-isotope labeled products that can be simultaneously assayed by neutron activation. Researchers use these products in an analogous fashion to their radioactive and optically based counterparts. When the experiment is completed, only the samples-of-interest are sent to BioPAL for analysis of tracer(s) content and the results of the assay are returned to the researcher within a few days. BioPAL's report sheet provides the customer with the number of disintegrations per minute (dpm) measured for each labeled measured in each sample, which is analogous to the traditional radioactive method.

### Assay Service

BioPAL offers three assay services: 1) The standard service, 2) Short enhanced service, and the 3) Long enhanced service, which the enhanced services provide approximately 100x increased sensitivity. Researchers will need to evaluate the limits of sensitivity for their unique application. The results of both assay services are reported as the total disintegrations per minute (dpm) measured in each sample for each corresponding label.

#### Catalog

##### Number

A-0MS01	Standard Assay Fee for 2 ml and 4 ml sample vials .....	\$ 11.00 per sample
A-0MS05a	Short Enhanced Assay Fee for 2 ml and 4 ml sample vials ..... Europium and dysprosium labels only. Must discuss your protocol with BioPAL first.	\$ 25.00 per sample
A-0MS05	Long Enhanced Assay Fee for 2 ml and 4 ml sample vials ..... All other labels. Must discuss your protocol with BioPAL first.	\$ 50.00 per sample
A-0MS02	Standard Assay Fee for 20 ml blood sample.....	\$ 25.00 per sample
A-0MS04	Assay Fee for 20 ml vial containing tissue ..... Europium and dysprosium labels only. Must discuss your protocol with BioPAL first.	\$ 50.00 per sample
A-0MS06a	Short Enhanced Assay Fee for 20 ml sample vials ..... The fee is for both tissue and blood samples. Europium and dysprosium labels only. Must discuss your protocol with BioPAL first.	\$100.00 per sample
A-0MS06	Long Enhanced Assay Fee for 20 ml sample vials..... The fee is for both tissue and blood samples. All other labels. Must discuss your protocol with BioPAL first.	\$175.00 per sample

