

Alpha Spectra, Inc. Special Detector Designs

Alpha Spectra is an expert at designing special detectors. Our detectors have been used in applications that include: Homeland Security, Oil and Gas Exploration, Health Physics Applications, Astrophysics, Medical Imaging, Industrial Gauging, Particle Physics, Material Science, and Ultra-Low Background Counting.

The Alpha Spectra detector designs satisfy specifications that challenge the limits of detector technology. Our detectors meet strict requirements needed to qualify for unmanned space flight. Our detectors are used in rugged high-temperature geophysical exploration. Our Ultra Low Background design will improve your detection capabilities.

This data sheet gives some examples of some of our special designs. We encourage you to discuss your detector needs with us. We would like to tell you more about our capabilities. The challenge of satisfying detectors specifications is what makes our work interesting.



Figure 1. Ultra Low Background X-Ray Detectors



Figure 2. Ultra Low Background Gamma Detectors



Figure 3. Ruggedized Detectors.

The NaI(Tl) scintillation crystals are grown and machined at our facility that is located in Grand Junction, Colorado. Our facility has extensive metalworking capability in order to control quality, cost and delivery.



Figure 4. BGO Annulus and "Backcatcher" Detectors



Figure 5. NaI(Tl) 9" x 9" Annulus and Plug Detector



Figure 7. Ultra Low Background Annular Detector



Figure 6. Homeland Security Configurations.



Figure 8. Special BaF₂ Detectors.

Delivering a quality product is our highest priority. Our in process and final testing ensures that ASI will deliver a detector that meets customer specifications.

Please contact Alpha Spectra, Inc. so that our design team may help you design a custom detector configuration for your application.

Alpha Spectra has manufactured over 100,000 detectors in becoming the world's second largest producer of NaI(Tl) scintillation crystals. We are proud of the manner in which our staff has worked together in developing a technology-based company with world class expertise.

Alpha Spectra, Inc. is the only American-owned company in the industry that has its own purification and growth processes. Our manufacturing process begins with exceptionally clean starting material. This material is processed using a growth technique that has been developed in house. Our high-quality detectors are assembled utilizing techniques that have been developed with over 100 years of combined working experience. Contact Alpha Spectra, Inc. for your scintillation detector requirements and be assured that you will get personal attention.

