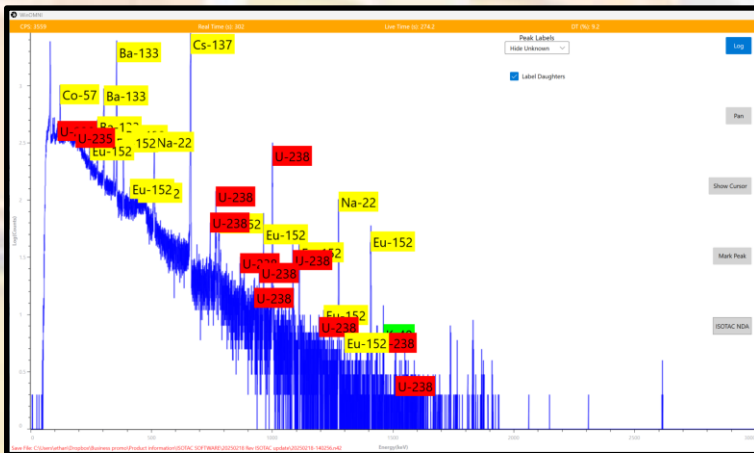
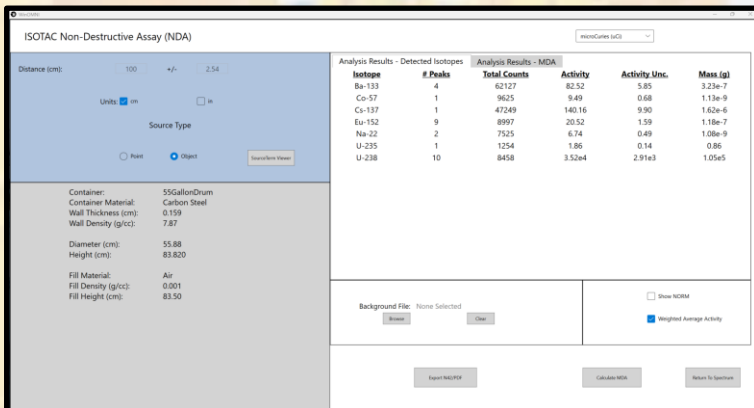


ISOTAC SourceTerm Viewer allows creation of models with filled (or partially filled) 3-Dimensional objects (Drums, B-25, cargo containers, etc...), variable detector distances and multiple layers of attenuating material for NDA calculations.



Gamma-ray Spectroscopy and Isotope Identification from WinOMNI Data acquisition or previously recorded .n42 files from Android OMNI serve as input to ISOTAC.



ISOTAC Non-Destructive Assay (NDA) Calculations incorporate user specified uncertainties, statistical uncertainties (counting statistics) and background to provide NDA results quickly and conveniently.

ISOTAC Software Features:

- Runs under PHDS WinOMNI Windows-Based DAQ / Control Software
- Produces Data Formats accepted by other commercial NDA packages
- Produces Standard N42.42 output, Report PDF, and QA Report
- Quantitative Assay Measurements with PHDS Co. HPGe Detectors
- Fulcrum and Fulcrum-40h Mechanically Cooled Detectors
- Useful with PHDS Co. QuantiCart Portable NDA/MDA System
- Loads and Analyzes data files recorded on the onboard Android OMNI
- Make Custom Models for your analysis workflow
- Load user-created models into ISOTAC for analysis of any physical object
- Full model file reload, modify, resave and offline analysis
- User controlled statistical detection and ID requirement ($N\sigma$)
- ISOTAC generates measurement assay reports with full description

ISOTAC is readily compatible with Fulcrum, Fulcrum-40h and QUANTICART.



Isotope	Energy (keV)	BG Count	Activity	Activity Unc.	Mass (g)
Ac-225	440.5	2797	1.00	0.11	1.72e-11
Ag-108m	722.9	619	0.23	3.09e-2	2.88e-8
Ag-110m	884.7	468	0.31	4.41e-2	6.51e-11
Am-241	59.5	2454	1.72	0.19	5.04e-7
Ar-41	1293.6	64	0.12	2.62e-2	2.91e-15
Ba-133	356.0	39975	1.29	0.10	5.04e-9
Be-7	477.6	2560	2.58	0.28	7.41e-12
Bi-207	569.7	1254	0.23	2.8e-2	4.26e-9
Br-77	520.6	1655	1.06	0.12	1.46e-12
Ca-47	1297.1	114	0.23	4.29e-2	3.68e-13
Ce-139	165.9	8702	0.29	2.66e-2	4.22e-11
Ce-141	145.4	9058	0.48	4.43e-2	1.68e-11
Ce-144	133.5	8538	2.05	0.19	6.42e-10
Cf-249	388.2	2549	0.33	3.57e-2	8.11e-8
Cf-252	388.2	2549	0.33	3.57e-2	6.18e-10
Cm-244	554.6	1330	2.89e5	3.44e4	3.58e-3
Co-55	931.3	291	0.25	3.88e-2	7.62e-14

ISOTAC Minimum Detectable Activity (MDA) calculator provides a list of MDAs for each user-specified library isotope and NDA scenario.

Container Type	Width (cm)	Height (cm)	Depth (cm)	Wall Thick (cm)	Wall Density (g/cc)
B-25 container	183.833	120.968	118.110	0.270	7.87

Material	Density (g/cc)	Thickness (cm)
Concrete	2.3	10
PVC	1.374	5
Stainless Ste	7.66	1

Several standard source term objects exist in the ISOTAC library. Custom objects can be imported and filled with attenuating/source materials.