**GAMON-M LABORATORY TESTSHEET**

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| REFERENCES |
| PRODUCT CODE | ***WSGMOBNA4AAD*** |
| PRODUCT IDENTIFICATION | **CAEN PID S/N** |
| PID |
| **INDEX OF PERFORMED TESTS**  |
| COMPONENTS CHECKLIST | ***PASSED/NOT PASSED*** |
| BACKGROUND MEASUREMENT | ***DONE*** |
| ALARM THRESHOLD SETUP |  |
| IDENTIFICATION CHECK: |  |
| Co-57 |  |
| Cs-137 |  |
| Am-241 |  |
| Co-57, Cs-137, Co-60, Am-241 |  |
| **DATE** | **SITE** |
|  |  |
| **SIGNATURES** |
| **Test department operator** | **Approved by** |

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| COMPONENTS CHECKLIST |
| **ITEM** | **DETAIL** | **PID S/N** |
| GAMMA DETECTOR | *Model:* | *NaI(Tl)* | S1AB2628 |
| *Size:* | *4” x 4” x 16”* |
| NEUTRON DETECTOR | *Yes* |  |
| DOSIMETER DETECTOR | *Yes* |  |
| ELECTRONIC (2580) | Yes | PID |
| ELECTRONIC BOX and TROLLEY CASE | Yes |  |
| BATTERY  | Yes | PID |
| CHARGER  | Yes |  |
| SOFTWARE/FIRMWARE VERSION | *Software Version:* | *2.0.0* |
| *Api Version:*  | *1.6.35* |
| *DAQ Version:* | *v2.9.1\_20230915\_1436* |
| *UI Version:* | *1.113* |

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| ENERGY AND FWHM CALIBRATION |
| **MCA SETTING** |
| TRAP RISE TIME (µs) | *1* | RCCR2 SMOOTHING | *16* |
| TRIGGER THRESHOLD  | *4* | FINE GAIN | *5.4* |
| SIGNAL RISE TIME (µs) | *0.2* | SAMPLES FOR BASELINE MEAN | *1024* |
| MAX CURRENT (mA) | *350* | COARSE GAIN | *x4* |
| FLAT TOP (µs) | *1* | FLAT TOP DELAY (%) | *75* |
| VOLTAGE (V) | *665* |  |
| **STABILIZATION ANS MOVING AVERAGES** |
| FIND PEAK DURATION (s) | *60* | ICR INTEGRATION TIME | *1* |
| NEUTRON INTEGRATION TIME | *10* |  |
| BACKGROUND MEASUREMENT |
| NOTE | All sources removed and a run is performed |
| ICR (cps) | *2.685* |
| GAMMA DOSE RATE (µSv/h) | *0.127* |
| SPECTROSCOPIC DOSE RATE (µSv/h) | *0.057* |
| NEUTRON COUNT RATE (cps) | *0.000* |
| **SPECTRA** |
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| ALARM THRESHOLD SETUP |
| NOTE | * Take ICR from background measurement
* Calculate a “sigma” estimation (Square root of ICR)
* Set warning threshold: ICR background + 3/10/20\*sigma
* Set Alarm threshold: ICR background + 5/20/50\*sigma
* Expose the mobile to 1 or more source and see what happen
* Fill the note section with notes and considerations
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| ICR (cps) | *2.685* |
| SIGMA (cps) | *0.127* |
| WARNING (cps) | *0.057* |
| ALARM (cps) | *0.000* |
| **NOTES** |
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| INVESTIGATION AND OPERATION MODE |
| NOTE | * Operation and Investigation modes
* Go in the setting and set the Operation mode
* Start a mission and name it “Operation mode test”
	+ Expose to Am-241 for 10 seconds
	+ Remove all sources for 10 seconds
	+ Expose to Cs-137 for 10 seconds
	+ Remove all sources for 10 seconds
	+ Expose to Co-60 for 10 seconds
	+ Remove all sources for 10 seconds
* Stop the mission and download the report
* Fill the note section with notes and considerations
* Go in the setting and set Investigation mode
* Repeat the above procedure
* Fill the note section with notes and considerations
* Analyse the differences between the two reports and make your considerations
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| **NOTES** |
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| IDENTIFICATION CHECK |
| **RADIATION MEASUREMENT CHECK** |
| **SOURCE** | **ACTIVITY** | **REF. DATE** | **DISTANCE** |
| ***Co-57*** | ***9.20 uCi*** | *21/9/2023* | ***40 cm*** |
| ICR (cps) | *5.353* |
| SPECTROSCOPIC DOSE RATE (µSv/h) | 0.072 |
| NEUTRON COUNT RATE (cps) | *0.000* |
| **SPECTRUM** |
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| **RADIATION MEASUREMENT CHECK** |
| **SOURCE** | **ACTIVITY** | **REF. DATE** | **DISTANCE** |
| ***Cs-137*** | ***9.49 uCi*** | *5/8/2022* | ***40 cm*** |
| ICR (cps) | *8.083* |
| SPECTROSCOPIC DOSE RATE (µSv/h) | *0.198* |
| NEUTRON COUNT RATE (cps) | *0.200* |
| **SPECTRUM** |
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| **RADIATION MEASUREMENT CHECK** |
| **SOURCE** | **ACTIVITY** | **REF. DATE** | **DISTANCE** |
| ***Am-241*** | ***10.8 uCi*** | *15/6/2022* | ***40 cm*** |
| ICR (cps) | *5.754* |
| SPECTROSCOPIC DOSE RATE (µSv/h) | *0.067* |
| NEUTRON COUNT RATE (cps) | *0.000* |
| **SPECTRUM** |
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| **RADIATION MEASUREMENT CHECK** |
| **SOURCE** | **ACTIVITY** | **REF. DATE** | **DISTANCE** |
| ***Co-57*** | ***9.20 uCi*** | *21/9/2023* | ***40 cm*** |
| ***Co-60*** | ***1.00 uCi*** | *15/5/2013* | ***10 cm*** |
| ***Cs-137*** | ***9.49 uCi*** | *5/8/2022* | ***40 cm*** |
| ***Am-241*** | ***10.8 uCi*** | *15/6/2022* | ***40 cm*** |
| ICR (cps) | *14.697* |
| SPECTROSCOPIC DOSE RATE (µSv/h) | *0.294* |
| NEUTRON COUNT RATE (cps) | *0.000* |
| **SPECTRUM** |
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# put warning and alarm threshold on all the mobiles on the best value following the round table consideration

# edit the nuclide library following the standard and the best consideration

# switch off everything and put tablet and mobile under charge before leaving the room