**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 | | | | |
| 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 | | | | |
| **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