WP2012-34

Coding of SAMPLE (MEMO 4C-4/195)

(M.Mikhaylyukova)

SAMPLE coding in EXFOR was analyzed. A rule "sum of abundances of one sample has to be less or equal 1." was checked. List of Subents containing mistakes and misprints is given at the end of this memo.
Typical mistakes:

1) "(" is in 12th column, but does not follow by coded information.
2) Abundances are given in %.
3) Sum of abundances for one sample is > 1.
4) "ENR=" or "NAT" is absent.
5) Blanks, which are not allowed.
6) ENR=0 is given for isotope presented in SF1 of REACTION.
7) Lower case in name of isotope (e.g. Zn instead ZN)
8) There are 4 cases, when two or more samples for the same element are given in one Subent -23128, C1825, D0626, D4239. In such cases it's preferable to use pointers to point, that these are different samples or to present monitor sample information in Subet 001, and other investigated samples in Subents 002, 003 and so on.

Proposals:

- add in EXFOR manual, SAMPLE:
  - "abundances have to be given as not-dimensional, % are not allowed"
  - "sum of abundances for one sample has to be less or equal 1."
  - "maximal values of abundances have to be given in free text only"
- introduce checking of SAMLE coding rule in checking codes, where it's possible.
- correct listed Subents according to rules of SAMPLE coding.

List of Subents containing mistakes of SAMPLE coding:

(MM:… - my comments)

10357.005: (NH4)2U2O7 samples.

13922.004: (97.28 %) target of 10 g in aluminum frame.
13922.005: (97.28 %) target of 10 g in aluminum frame.
13922.006: (97.28 %) target of 10 g in aluminum frame.

14110.010: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?) .
14110.010: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.010: (64-GD-155,ENR= 0.744233)
14110.010: (64-GD-156,ENR= 0.175674)
14110.010: (64-GD-157,ENR= 0.037513)
14110.010: (64-GD-158,ENR= 0.025336)
14110.010: (64-GD-160,ENR= 0.007278)

14110.012: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?)
14110.012: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.012: (64-GD-155,ENR= 0.744233)
14110.012: (64-GD-156,ENR= 0.175674)
14110.012: (64-GD-157,ENR= 0.037513)
14110.012: (64-GD-158,ENR= 0.025336)
14110.012: (64-GD-160,ENR= 0.007278)

14110.013: (64-GD-152,ENR = 0.000051) MM:Sum 1.00001 >1.(max value somewhere?)
14110.013: (64-GD-154,ENR = 0.000753) MM:Blank not allowed.
14110.013: (64-GD-155,ENR = 0.013515)
14110.013: (64-GD-156,ENR = 0.073627)
14110.013: (64-GD-157,ENR = 0.696623)
14110.013: (64-GD-158,ENR = 0.194431)
14110.013: (64-GD-160,ENR = 0.021000)

14110.014: (64-GD-152,ENR = 0.000051) MM:Sum 1.00001 >1.(max value somewhere?)
14110.014: (64-GD-154,ENR = 0.000753) MM:Blank not allowed.
14110.014: (64-GD-155,ENR = 0.013515)
14110.014: (64-GD-156,ENR = 0.073627)
14110.014: (64-GD-157,ENR = 0.696623)
14110.014: (64-GD-158,ENR = 0.194431)
14110.014: (64-GD-160,ENR = 0.021000)

14110.015: (64-GD-152,ENR = 0.000051) MM:Sum 1.00001 >1.(max value somewhere?)
14110.015: (64-GD-154,ENR = 0.000753) MM:Blank not allowed.
14110.015: (64-GD-155,ENR = 0.013515)
14110.015: (64-GD-156,ENR = 0.073627)
14110.015: (64-GD-157,ENR = 0.696623)
14110.015: (64-GD-158,ENR = 0.194431)
14110.015: (64-GD-160,ENR = 0.021000)

14110.016: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?)
14110.016: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.016: (64-GD-155,ENR= 0.744233)
14110.016: (64-GD-156,ENR= 0.175674)
14110.016: (64-GD-157,ENR= 0.037513)
14110.016: (64-GD-158,ENR= 0.025336)
14110.016: (64-GD-160,ENR= 0.007278)

14110.020: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?)
14110.020: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.020: (64-GD-155,ENR= 0.744233)
14110.020: (64-GD-156,ENR= 0.175674)
14110.020: (64-GD-157,ENR= 0.037513)
14110.020: (64-GD-158,ENR= 0.025336)
14110.020: (64-GD-160,ENR= 0.007278)

14110.021: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?)
14110.021: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.021: (64-GD-155,ENR= 0.744233)
14110.021: (64-GD-156,ENR= 0.175674)
14110.021: (64-GD-157,ENR= 0.037513)
14110.021: (64-GD-158,ENR= 0.025336)
14110.021: (64-GD-160,ENR= 0.007278)

14110.022: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?)
14110.022: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.022: (64-GD-155,ENR= 0.744233)

14110.022: (64-GD-156,ENR= 0.175674)
14110.022: (64-GD-157,ENR= 0.037513)
14110.022: (64-GD-158,ENR= 0.025336)
14110.022: (64-GD-160,ENR= 0.007278)

14110.023: (64-GD-152,ENR= 0.000108) MM:Sum 1.00001 >1.(max value somewhere?)
14110.023: (64-GD-154,ENR= 0.009859) MM:Blank not allowed.
14110.023: (64-GD-155,ENR= 0.744233)
14110.023: (64-GD-156,ENR= 0.175674)
14110.023: (64-GD-157,ENR= 0.037513)
14110.023: (64-GD-158,ENR= 0.025336)
14110.023: (64-GD-160,ENR= 0.007278)

14150.001: (weight 2.3 g) or 5 x 5 cm**2 and 0.3 cm thick
14150.001: (wight 16.6 g), the natSi targets 1.5 cm in diameter

14187.001: (10B/11B=18.80) dissolved in distilled water, pipeted
14190.001: (235U-93.2%,238U-5.2%,234U-1.0%,236U-0.67%) or

14239.026: (72-HF-174,ENR=0.0008) MM:Sum 1.0001 >1.(max value somewhere?)
14239.026: (72-HF-176,ENR=0.5617)
14239.026: (72-HF-177,ENR=0.2696)
14239.026: (72-HF-178,ENR=0.1060)
14239.026: (72-HF-179,ENR=0.0249)
14239.026: (72-HF-180,ENR=0.0371)

14239.027: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.027: (72-HF-176,ENR=0.0178)
14239.027: (72-HF-177,ENR=0.0420)
14239.027: (72-HF-178,ENR=0.8337)
14239.027: (72-HF-179,ENR=0.0558)

14239.027: (72-HF-180,ENR=0.0356) MM:Sum 1.0001 >1.(max value somewhere?)
14239.028: (72-HF-174,ENR=0.0150)
14239.028: (72-HF-176,ENR=0.0178)
14239.028: (72-HF-177,ENR=0.0420)
14239.028: (72-HF-178,ENR=0.8337)
14239.028: (72-HF-179,ENR=0.0558)
14239.028: (72-HF-180,ENR=0.0356)

14239.029: (72-HF-174,ENR=0.0008) MM:Sum 1.0001 >1.(max value somewhere?)
14239.029: (72-HF-176,ENR=0.5617)
14239.029: (72-HF-177,ENR=0.2696)
14239.029: (72-HF-178,ENR=0.1060)
14239.029: (72-HF-179,ENR=0.0249)
14239.029: (72-HF-180,ENR=0.0371)

14239.030: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.030: (72-HF-176,ENR=0.0178)
14239.030: (72-HF-177,ENR=0.0420)
14239.030: (72-HF-178,ENR=0.8337)

14239.030: (72-HF-179,ENR=0.0558)
14239.030: (72-HF-180,ENR=0.0356)

14239.031: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.031: (72-HF-176,ENR=0.0178)
14239.031: (72-HF-177,ENR=0.0420)
14239.031: (72-HF-178,ENR=0.8337)
14239.031: (72-HF-179,ENR=0.0558)
14239.031: (72-HF-180,ENR=0.0356)

14239.036: (72-HF-174,ENR=0.0008) MM:Sum 1.0001 >1.(max value somewhere?)
14239.036: (72-HF-176,ENR=0.5617)
14239.036: (72-HF-177,ENR=0.2696)
14239.036: (72-HF-178,ENR=0.1060)
14239.036: (72-HF-179,ENR=0.0249)
14239.036: (72-HF-180,ENR=0.0371)

14239.037: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.037: (72-HF-176,ENR=0.0178)
14239.037: (72-HF-177,ENR=0.0420)
14239.037: (72-HF-178,ENR=0.8337)
14239.037: (72-HF-179,ENR=0.0558)
14239.037: (72-HF-180,ENR=0.0356)

14239.038: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.038: (72-HF-176,ENR=0.0178)
14239.038: (72-HF-177,ENR=0.0420)
14239.038: (72-HF-178,ENR=0.8337)
14239.038: (72-HF-179,ENR=0.0558)
14239.038: (72-HF-180,ENR=0.0356)

14239.039: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.039: (72-HF-176,ENR=0.0178)
14239.039: (72-HF-177,ENR=0.0420)
14239.039: (72-HF-178,ENR=0.8337)
14239.039: (72-HF-179,ENR=0.0558)
14239.039: (72-HF-180,ENR=0.0356)

14239.040: (72-HF-174,ENR=0.0150) MM:Sum 1.0001 >1.(max value somewhere?)
14239.040: (72-HF-176,ENR=0.0178)
14239.040: (72-HF-177,ENR=0.0420)
14239.040: (72-HF-178,ENR=0.8337)
14239.040: (72-HF-179,ENR=0.0558)
14239.040: (72-HF-180,ENR=0.0356)

14239.041: (72-HF-174,ENR=0.0008) MM:Sum 1.0001 >1.(max value somewhere?)
14239.041: (72-HF-176,ENR=0.5617)
14239.041: (72-HF-177,ENR=0.2696)
14239.041: (72-HF-178,ENR=0.1060)
14239.041: (72-HF-179,ENR=0.0249)
14239.041: (72-HF-180,ENR=0.0371)

14257.001: (92-U-233,ENR=0.9901) MM:Sum 1.0002 >1.(max value somewhere?)
14257.001: (92-U-234,ENR=0.0074)
14257.001: (92-U-235,ENR=0.0023)
14257.001: (92-U-238,ENR=0.0004)

22006.029: (20050716A) Sample data added
22358.002: (SPSDD,22354006)

22680.006: (82-PB-204,NAT=0.01284) (1.284+-0.020)% MM:Sum 1.0004 >1.(in errors limits?)
22680.006: (82-PB-206,NAT=0.2712) (27.12+-0.26)%
22680.006: (82-PB-207,NAT=0.2049) (20.49+-0.17)%
22680.006: (62-PB-208,NAT=0.5111) (51.11+-0.24)%.

22680.007: (82-PB-204,NAT=0.01284) (1.284+-0.020)% MM:Sum 1.0004 >1.(in errors limits?)
22680.007: (82-PB-206,NAT=0.2712) (27.12+-0.26)%
22680.007: (82-PB-207,NAT=0.2049) (20.49+-0.17)%
22680.007: (62-PB-208,NAT=0.5111) (51.11+-0.24)%.

22680.008: (82-PB-204,NAT=0.01284) (1.284+-0.020)% MM:Sum 1.0004 >1.(in errors limits?)
22680.008: (82-PB-206,NAT=0.2712) (27.12+-0.26)%
22680.008: (82-PB-207,NAT=0.2049) (20.49+-0.17)%
22680.008: (62-PB-208,NAT=0.5111) (51.11+-0.24)%

22680.010: (82-PB-204,NAT=0.01284) (1.284+-0.020)% MM:Sum 1.0004 >1.(in errors limits?)
22680.010: (82-PB-206,NAT=0.2712) (27.12+-0.26)%
22680.010: (82-PB-207,NAT=0.2049) (20.49+-0.17)%
22680.010: (62-PB-208,NAT=0.5111) (51.11+-0.24)%

22789.004: (93-NP-237,100.) Weight 12.82 +-0.08 milligram, 2

22789.005: (92-U-236,99.845)
22789.005: (92-U-234,,0.00001)
22789.005: (92-U-235,0.047)
22789.005: (92-U-238,0.107)

22789.006: (92-U-236,ENR=0.99845) MM:Sum=1.15245 >1.
22789.006: (92-U-235,ENR=0.047)
22789.006: (92-U-238,ENR=0.107)

22789.008: (92-U-236,ENR=0.99845) MM:Sum=1.15245 >1.
22789.008: (92-U-235,ENR=0.047)
22789.008: (92-U-238,ENR=0.107)

22789.009: (92-U-236,ENR=0.99845) MM:Sum=1.15245 >1.
22789.009: (92-U-235,ENR=0.047)
22789.009: (92-U-238,ENR=0.107)

22789.012: (93-NP-237,100.) Weight 12.82 +- 0.08 milligram,
22789.013: (93-NP-237,100.) Weight 12.82 +- 0.08 milligram,

22932.003: (64-GD-152,ENR=0.0002) MM:Sum=1.0004 >1. (max values somewhere?)
22932.003: (64-GD-154,ENR=0.0016)
22932.003: (64-GD-155,ENR=0.0081)
22932.003: (64-GD-156,ENR=0.0221)
22932.003: (64-GD-157,ENR=0.9096)
22932.003: (64-GD-158,ENR=0.0508)
22932.003: (64-GD-160,ENR=0.0080)

22932.010: (64-GD-152,ENR=0.0002) MM:Sum=1.0004 >1. (max values somewhere?)
22932.010: (64-GD-154,ENR=0.0016)
22932.010: (64-GD-155,ENR=0.0081)
22932.010: (64-GD-156,ENR=0.0221)
22932.010: (64-GD-157,ENR=0.9096)
22932.010: (64-GD-158,ENR=0.0508)
22932.010: (64-GD-160,ENR=0.0080)

22932.011: (64-GD-152,ENR=0.0002) MM:Sum=1.0004 >1. (max values somewhere?)
22932.011: (64-GD-154,ENR=0.0016)
22932.011: (64-GD-155,ENR=0.0081)
22932.011: (64-GD-156,ENR=0.0221)
22932.011: (64-GD-157,ENR=0.9096)
22932.011: (64-GD-158,ENR=0.0508)
22932.011: (64-GD-160,ENR=0.0080)

23074.001: (26 MBq) of neptunium oxide NpO2 powder, packed in Al
23074.001: (0.2mm) Al container of 25 mm diameter with sample
23074.001: (Eu-152, Co-60, Cs-137) were used in measurement.
23075.001: (0.1 mm thickness, weight 5.6395+-0.0001 mg, chemical

23080.002: (64-GD-152,ENR=0.0001) MM:Sum=1.0001 >1. (max values somewhere?)
23080.002: (64-GD-154,ENR=0.0011)
23080.002: (64-GD-155,ENR=0.0196)
23080.002: (64-GD-156,ENR=0.9379)
23080.002: (64-GD-157,ENR=0.0253)
23080.002: (64-GD-158,ENR=0.0120)
23080.002: (64-GD-160,ENR=0.0041)

23080.003: (64-GD-152,ENR=0.0001) MM:Sum=1.0006 >1. (max values somewhere?)
23080.003: (64-GD-154,ENR=0.0001)
23080.003: (64-GD-155,ENR=0.0096)
23080.003: (64-GD-156,ENR=0.017)
23080.003: (64-GD-157,ENR=0.0356)
23080.003: (64-GD-158,ENR=0.920)
23080.003: (64-GD-160,ENR=0.0182)

23089.001: (38-SR-84,ENR=0.0001) MM:Sum=1.0001 >1. (max values somewhere?)
23089.001: (38-SR-86,ENR=0.0002)
23089.001: (38-SR-87,ENR=0.0008)
23089.001: (38-SR-88,ENR=0.9990)

23092.001: (87.1+-1.2)% of Ge-76. 12 mm diameter, about 2 mm

23098.005: (98.8% of Cm fraction) mainly the non-fissile isotopes
23100.001: (H9 channel)

23128.001: (92-U-233,ENR=0.990) MM:Two different samples.*****
23128.001: (92-U-235,ENR=0.99992)
MM: MONITOR U-235 sample could be used in Suben 001, U-233 – in Subents 002-003

30099.001: (1.1E+6 fissions/minute) on thin platinum foil.
30704.002: (92-U-233,0.9) 1.0 mg/cm2 thickness, 45 mm diameter
30704.003: (92-U-235,0.9) 1.0 mg/cm2 thickness, 45 mm diameter
30704.004: (94-PU-239,0.9) 1.0mg/cm2 thickness, 45 mm diameter
30928.001: (Gd-155(0.18%), Gd-156(0.33%), Gd-157(0.44%),
31501.002: (metallic Al+metallic Fe) sample, 80*80*(5.7+1.3) mm,
31501.002: (98.1+67.7) g.
31501.003: (metallic Al+metallic Fe) sample, 80*80*(5.7+1.3) mm,
31501.003: (98.1+67.7) g.
31501.004: (metallic Al+metallic Fe) sample, 80*80*(5.7+1.3) mm,
31501.004: (98.1+67.7) g.
31501.009: (120.2+80.0 g)
31501.010: (120.2+80.0 g)
31501.011: (120.2+80.0 g)
31591.002: (As2O3 and As2O5) were individually irradiated under
31603.001: (10.20 g/cm3) with a diameter of 62.98 +- 0.01 mm
31616.001: (Wagner et al., 1990).
31633.001: (Au)to 0.5-0.7mm (Ta and CrNi).
31662.002: (0.214 +- 0.002) cm inner thickness sealed with an
31662.003: (0.214 +- 0.002) cm inner thickness sealed with an

31698.004: (79-AU-198, NAT=1.) MM:Blank is allowed?
31698.005: (79-AU-198, NAT=1.)

32650.001: (thickness 0.186 mg/cm2) and 1.84 mg (thickness

32672.001: (30-Zn-67,ENR=0.954) MM:Zn -> ZN
32689.001: (30-Zn-67,ENR=0.954)

33011.001: (~ 500 micro gram), 99.48 atom % 240Pu
33011.001: (~ 96 micro gram) and 99.43 atom % 244Cm
33011.001: (~ 96 micro gram) were covered with 75 micro meter

33030.001: (100 micro g), 239Pu (100 micro g), 241Pu (25 micro

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40068.001: (METAL) METALLIC SAMPLE OF NATURAL URANIUM WITH

C1439.001: (56Fe) and 12.1 mg/cm2 (60Ni), respectively.
C1461.001: (1-2 microg/cm2) layer of evaporated Au, and carbon
C1604.001: (CD2)n deuterated polyethylene foil with thickness
C1632.014: (48TiO2) enriched to 99.1% in 48Ti on thin

C1632.014: (20 mug/cm2) VYNS film
C1632.015: (48TiO2) enriched to 99.1% in 48Ti on thin
C1632.015: (20 mug/cm2) VYNS film
C1632.016: (48TiO2) enriched to 99.1% in 48Ti on thin
C1632.016: (20 mug/cm2) VYNS film
C1670.001: (470+-60) mu-g/cm2-thick Pb targets (isotopic
C1705.001: (0.2-2.0 mu-g/cm2) layer of evaporated Au and carbon
C1724.001: (CH2)n foil with thickness of 7.9 mg/cm2, in which
C1758.001: (CH2)n target with thickness of approx. 40 mu-m
C1816.001: (OFHC) copper substrate. 22Na ions were produced by

C1825.001: (7-N-15,ENR=0.98) Target used at Notre Dame MM:Two different samples****
C1825.001: (7-N-14,ENR=0.02)Ti15N targets were fabricated by
C1825.001: (7-N-15,ENR=0.826) Target used at LUNA 2
C1825.001: (7-N-14,ENR=0.174)
MM: Pointers could be used with FACILITY

D0275.002: (E-LVL,64-GD-159) MM:EN-SEC has to be added in 1-11 positions.
D0275.003: (E-LVL,64-GD-159)
D0275.004: (E-LVL,64-GD-159)

D0280.001: (natural abundance 0.25%). The V2O5 powder was
D0364.001: (92.5% of 7Li)was used as a target.

D0456.002: (EN-ERR-DIG) Digitizing error MM:ERR-ANALYS has to be added in 1-11 positions.
D0456.002: (ERR-DIG) Digitizing error

D0479.001: (0.43%), 66Zn (0.08%), 64Zn (<0.01%), 70Zn (0.09%)
D0490.001: (Most runs were made with 1 to 1.5 mg/cm2 of
D0496.001: (12.39 %),111Cd(12.75 %),112Cd (24.07 %) and 113Cd
D0496.001: (12.26%).
D0505.001: (0.1 or 0.05 mm thick) and the aluminium discs(1.2 or

D0547.001: (96.1% abundance, impurities : 58Ni 1.95%, 60Ni 1.31%,
D0556.001: (99.99% pure, 109Ag 48.35%,107Ag 51.65%)

D0626.001: (12-MG-25,NAT=0.1) MM:Two different samples*****
D0626.001: (12-MG-25,ENR=0.93)
MM: Pointers could be used with FACILITY.

D0634.001: (0.5%), and 198Pt (0.06%) in the target enriched in
D0634.001: (0.29%) in the target enriched in 196Pt.

D0639.001: (28-Ni-64,ENR=0.996) MM:Ni -> NI

D4198.001: (both >99.6% pure) with thicknesses of 10 and 25
D4219.001: (54-XE-131,99.6) Highly enriched 131Xe gas (99.6%)

D4236.001: (68-ER-162,ENR=0.0006) MM:Sum=0.0012 >1. (max values somewhere?)
D4236.001: (68-ER-164,ENR=0.0006)

D4236.001: (68-ER-166,ENR=0.0114)
D4236.001: (68-ER-167,ENR=0.956)
D4236.001: (68-ER-168,ENR=0.0308)
D4236.001: (68-ER-170,ENR=0.0018)

D4237.001: (99.99%, Sigma-Aldrich, USA) in a punch-and-die set

D4239.001: (34-SE-77,0.9177) MM:Three different samples*****
D4239.001: (34-SE-78,0.9858)
D4239.001: (34-SE-80,0.999)
MM: SAMPLE information could be moved in corresponding Subents 002-005

D4249.001: (81-TL-203,NAT=29.52)
D4249.001: (81-TL-205,NAT=70.48)

D5047.001: (content of tritium nuclei 40%) was used in d,t
D5071.001: (47.2%), Zn-70(0.3%).
D6010.001: (95.7%) + 113IN (4.3%)) thickness 1.2mg/cm**2 and
D6045.001: (thichness ~ 500 microgram/cm2) was used. In this

E1686.002: (26-FE-56,ENR=0) MM: SF1=26-FA-56 in REACTION
E1686.003: (26-FE-56,ENR=0)
E1686.004: (26-FE-56,ENR=0)
E1686.008: (26-FE-56,ENR=0)
E1686.009: (26-FE-56,ENR=0)
E1686.010: (26-FE-56,ENR=0)
E1686.014: (26-FE-56,ENR=0)
E1686.015: (26-FE-56,ENR=0)
E1686.016: (26-FE-56,ENR=0)
E1686.017: (26-FE-56,ENR=0)
E1686.018: (26-FE-56,ENR=0)
E1686.019: (26-FE-56,ENR=0)
E1686.020: (26-FE-56,ENR=0)
E1686.021: (26-FE-56,ENR=0)
E1686.022: (26-FE-56,ENR=0)
E1686.023: (26-FE-56,ENR=0)
E1686.024: (26-FE-56,ENR=0)
E1686.025: (26-FE-56,ENR=0)
E1686.026: (26-FE-56,ENR=0)
E1686.027: (26-FE-56,ENR=0)
E1686.028: (26-FE-56,ENR=0)
E1686.029: (26-FE-56,ENR=0)
E1686.030: (26-FE-56,ENR=0)
E1686.031: (26-FE-56,ENR=0)
E1686.042: (26-FE-56,ENR=0)
E1686.043: (26-FE-56,ENR=0)
E1686.044: (26-FE-56,ENR=0)
E1686.047: (26-FE-56,ENR=0)
E1686.048: (26-FE-56,ENR=0)
E1686.049: (26-FE-56,ENR=0)

E1686.052: (26-FE-56,ENR=0)
E1686.053: (26-FE-56,ENR=0)

E1713.001: (26-FE-56,ENR=0) MM:SF1=26-FA-56 in REACTION
E1793.001: (12-MG-26,ENR=0) MM:SF1=12-MG-26 in REACTION
E2135.002: (28-NI-58,ENR=0) MM:SF1=28-NI-58 in REACTION
E2135.003: (50-SN-120,ENR=0) MM:SF1=50-SN-120 in REACTION
E2135.004: (28-NI-58,ENR=0) MM:SF1=28-NI-58 in REACTION
E2135.008: (50-SN-120,ENR=0) MM:SF1=50-SN-120 in REACTION
E2140.001: (3-LI-8,ENR=0) MM:SF1=3-LI-8 in REACTION

F0258.002: (8.14+-0.31)*10**16 at/cm2.
F0535.001: (9.58+-0.57)x10**17,
F0535.001: (5.72+-0.17)x10**17 K atoms*cm**-2
F0667.017: (92.0%).
F0712.001: (about 12 mu-g/cm2) of carbon.
F0748.001: (it cannot be damaged by the beam), of high purity,
F0833.001: (7.3+-0.4)*10**18 atoms of 61Ni cm**(-2).

G0021.001: (57-LA-139,NAT=99.9%) 3790 mg
G3105.001: (2mg/cm**2 thickness, 1.414x1.414 cm size) wrapped

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L0078.001: (20 mg/cm2) and 20 aluminium catcher foils arranged so

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T0074.002: (DATA-ERR) Upper limit of absolute uncertainty.
