INDC(JAP) 18 G
BANDC(J) 31 AL

Request List for Nuclear Data for the Development of Safeguards Techniques

Japanese Nuclear Data Committee
Subcommittee on Nuclear Data for Safeguards Techniques

September 1973

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
36-Kr-85	Gamma-ray Yields per Decay		I		1%	JAERI	Sasamoto	72

Comments: Yield per disintegration of the gamma ray of 514.0 keV is required to within 1%.

Status: Present status of accuracy is 2 - 3%

D.J. Horen, Nucl. Data Sheets, B5, No.2, 131 (1971)

M.J. Martin et al., Nucl. Data Tables, A8, 1 (1970)

B. Denecke et al., Nucl. Sci. Eng. 28, 301 (1967)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
44-Ru-103	Gamma-ray Yields per Decay		I		1% and 3%	JAERI	Sasamoto	72

Comments: Yields per disintegration of the following gamma rays are required.

Energy (keV)	Required accuracy (%)
497	1
557	3
610	1

Status: M.J. Martin and P.H. Blichert-Toft, Nucl. Data Tables A8, 1 (1970)

H. Pettersson, S. Antman and Y. Grunditz, Z. Physik 233, 260 (1970)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
45-Rh-106	Gamma-ray Yields per Decay		I		1% and 3%	JAERI	Sasamoto	72

Comments: Yields per disintegration of the following gamma rays are required

Energy (keV)	Required accuracy (%)
512	1
616	3
622	1
874	3
1050	1
1128	3
1562	3

Status: K.D. Strutz, H.J. Struz and A. Flammersfeld, Z. Physik 221, 231 (1969)
P. Odru, Radiochemi. Acta 12, 64 (1969)
M.J. Martin and P.H. Blichert-Toft, Nucl. Data Tables A8, 1 (1970)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
51-Sb-125	Gamma-ray Yields per Decay		I		1%	JAERI	Sasamoto	72

Comments: Yields per disintegration of the following gamma rays are required

Energy (keV)	Required accuracy (%)
176	1
381	1
428	1
464	1
601	1
607	1
636	1
672	1

Status: M.J. Martin and P.H. Blichert-Taft, Nucl. Data Tables A8, 1 (1970)
T.S. Naspal and R.E. Gancher, Can. J. Phys. 48, 2978 (1970)
C. Marsol and G. Ardisson, Comptes Rendus Acad. Sci. Ser. B272, 61 (1971)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
55-Cs-134	Gamma-ray Yields per Decay		II		1% and 3%	JAERI	Okashita	72

Comments: Yields per disintegration of the following gamma-rays are required

Energy (keV)	Required accuracy (%)
563	1
569	1
796	1
802	1
1039	3
1168	3
1365	3

Status: The yield of the strongest gamma-ray of 605 keV has been already determined with accuracy of 0.1%.

D.E. Raeside, J.J. Reidy and M.L. Wiedenbeck, Nucl. Phys. A98, 54 (1967)

A. Abdul-Malek and R.A. Naumann, Nucl. Phys. A106, 225 (1968)

H. Hofmann, H.K. Walter and A. Weitsch, Z. Phys. 230, 37 (1970)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
57-La-140	Gamma-ray Yields per Decay	:	I		1% and 3%	JAERI	Sasamoto	72

Comments: Yields per disintegration of the following gamma-rays are required.

Energy (keV)	Required accuracy (%)
328.8	1
432.6	3
487.0	1
815.8	1
2522.0	1

Status: The yield of the strongest gamma-ray of 1596.6 keV has been already determined with accuracy of 0.3%.

G. Ardisson et al., Rev. Roum. Phys. 16, 1045 (1971)

V.G. Kalinnikov et al., Izv. An. USSR ser. Fiz., 34, 916 (1970)

M.J. Martin et al., Nucl. Data Tables, A8, 1 (1970)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
58-Ce-144	Gamma-ray Yields per Decay		II		1%	JAERI	Okashita	72

Comments: Yield per disintegration of the gamma-ray of 133.5 keV is required to with 1%.

Status: Present status of accuracy is ~ 5%.

D. Berényi, IAEA/SM-170/1 (1973)

V.R. Potnis et al., J. Phys. Soc. Japan, 29, 539 (1970)

A. Anttila et al., Z. Phys. 237, 126 (1970)

M.J. Martin et al., Nucl. Data Tables, A8, 1 (1970)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
59-Pr-144	Gamma-ray Yields per Decay		I		1%	JAERI	Okashita	72

Comments: Yields per disintegration of the following gamma rays are required

Energy (keV)	Required accuracy (%)
696.5	1
1489.1	1
2185.7	1

Status: Present status of accuracy is 3 -7%.

M.J. Martin et al., Nucl. Data Tables, A8, 1 (1970)

J.L. Fashing et al., Phys. Rev., C1, 1126 (1969)

S. Raman, Nucl. Phys. A107, 402 (1968)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
63-Eu-154	Gamma-ray Yields per Decay		II		1% and 3%	JAERI	Okashita	72

Comments: Yields per disintegration of the following gamma-rays are required.

Energy (keV)	Required accuracy (%)	Energy (keV)	Required accuracy (%)
123	1	873	1
248	1	996	1
592	1	1005	1
692	3	1274	1
723	1	1597	3
757	1		

Status: R.A. Meyer, Phys. Rev. 170, 1089 (1968)
L.L. Riedinger, N.R. Johnson and J.H. Hamilton, Phys. Rev. C2, 2358 (1970)
T.S. Nagpal and R.E. Gancher, Can. J. Phys. 50, 2688 (1972)
M. Stoyanovich et al., Izv. Akad. Nauk. SSSR. Ser. Fiz. 34, 419 (1970)
Bull. Acad. sci. USSR Phys. Sei, 34, 364 (1971)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
63-Eu-155	Gamma-ray Yields per Decay		I		1%	JAERI	Sasamoto	72

Comments: Yields per disintegration of the following gamma-rays are required

Energy (keV)	Required accuracy (%)
86.5	1
105.3	1

Status: Present status of accuracy is 3 - 4%.

O.J. Eder et al., IAEA/SM-170/12 (1973)

R.A. Meyer et al., Nucl. Phys., A132, 177 (1969)

C. Foin et al., Jour. Phys., 28, 861 (1967)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
54-Xe-133	Half-life		II		1%	JAERI	Okashita	72

Comments: Different values are quoted in the literature.

Determination to within 1% is required.

Status: J.F. Energy et al., Nucl. Sci. Eng. 48, 319 (1972)

J. Macnamara et al., Phys. Rev. 78, 129 (1950)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
54-Xe-133m	Half-life		II		1%	JAERI	Okashita	72

Comments: Different values are quoted in the literature

Determination to within 1% is required.

Status: Nucl. Data Table A7, 477 (1970)

Justification: For burnup calculation from non-destructive measurement

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
63-Eu-154	Half-life		I		1%	JAERI	Okashita	72

Comments: Different values are quoted in the literature.

Determination to within 1% is required.

Status: Phys. Rev. 87, 901 (1952)

Nucl. Sci. Eng. 48, 319 (1972); $T_{\frac{1}{2}} = (8.5 \pm 0.5)y$, 6%

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
54-Xe-133	$\sigma(n,\gamma)$		I	Ther.-14 MeV	25%	JAERI	Okashita	72

Comments:

Status: T.J. Kennett and H.G. Thode: JINC 5, 253 (1958)

"Chart of the Nuclides" 3rd ed. (1968), Karlsruhe

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
54-Xe-133m	$\sigma(n,\gamma)$		I	Thermal	25%	JAERI	Okashita	72

Comments:

Status: No data

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
55-Cs-133	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	3%	JAERI	Okashita	72

Comments: RI : Resonance Integral

Status: BNL-325, 2nd ed. (1966)

F. Rigaud, J.L. Irigaray and G.Y. Petit, Nucl. Phys. A176, 545 (1971)

D. Kompe, Nucl. Phys. A133, 513 (1969)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
55-Cs-134	$\sigma(n,\gamma)$ RI		I	Thermal	3%	JAERI	Okashita	72

Comments:

Status: BNL-325, 2nd ed. (1966)

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
59-Pr-141	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	3%	JAERI	Okashita	72

Comments:

Status: BNL-325, 2nd ed. (1966);
J. Csikai et al., Nucl. Phys. A95, 229 (1967)
G. Petö et al., J. Nucl. Energy 21, 797 (1967)
D.C. Stupegia et al., J. Nucl. Energy, 22, 267 (1968)

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-142	$\sigma(n,\gamma)$		I	Thermal	2%	JAERI	Okashita	72
	RI			Ther.-14 MeV	25%			

Comments: RI : resonance integral

Status: Thermal: "Chart of the Nuclides", 3rd ed. (1968) Karlsruhe.
M.J. Cabell and M. Wilkins, J. Inorg. Nucl. Chem. 30, 897 (1968)

Ther.-14 MeV : no data

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-143	$\sigma(n,\gamma)$		I	Thermal	2%	JAERI	Okashita	72
	RI			Ther.-14 MeV	25%			

Comments: RI : resonance integral

Status: Thermal : BNL-325, 2nd ed. (1966)
M.J. Cabell and M. Wilkins, J. Inorg. Nucl. Chem. 30, 897 (1968)

Ther.-14 MeV : No data

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-144	$\sigma(n,\gamma)$		I	Thermal	3%	JAERI	Okashita	72
	RI			Ther.-14 MeV	25%			

Comments: RI : resonance integral

Status: Thermal : "Chart of the Nuclides" 3rd ed. (1968), Karlsruhe.
M.J. Cabell and M. Wilkins, J. Inorg. Nucl. Chem. 30, 897 (1968)

Ther.-14 MeV : No data

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-145	$\sigma(n,\gamma)$		I	Thermal	2%	JAERI	Okashita	72
	RI			Ther.-14 MeV	25%			

Comments: RI : resonance integral

Status: Thermal : BNL, 2nd ed. (1966)
M.J. Cabell and M. Wilkins, J. Inorg. Nucl. Chem. 30, 897 (1968)

Ther.-14 MeV : No data

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Jab/Org	Requestor	Year
60-Nd-146	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	3%	JAERI	Okashita	72

Comments: RI : resonance integral

Status: "Chart of the Nuclides," 3rd. ed. (1968), Karlsruhe.

J. Alstad et al., J. Inorg. Nucl. Chem. 29, 2155 (1967)

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-147	$\sigma(n,\gamma)$ RI		I	Thermal	25%	JAERI	Okashita	72

Comments: RI : resonance integral

Status: No data

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-148	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	3%	JAERI	Okashita	72

Comments: RI : resonance integral

Status: BNL-325, 2nd ed. (1966)
"Chart of the Nuclides", 3rd ed. (1968) Karlsruhe.
A.E. Johnsrud et al., Phys. Rev. 116, 927 (1959)
J. Alstad et al., J. Inorg. Nucl. Chem. 29, 2155 (1967)
S.S. Hasan et al., Nuovo Cimento 58B, 402 (1968)

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
60-Nd-150	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	3%	JAERI	Okashita	72

Comments: RI : resonance integral

Status: BNL-325 2nd ed. (1966)
"Chart of the Nuclides", 3rd ed. (1968) Karlsruhe
A.E. Johnsrud et al., Phys. Rev. 116, 927 (1959)
J. Alstad et al., J. Inorg. Nucl. Chem. 29, 2155 (1967)
S.S. Hasan et al., Nuovo Cimento 58B, 402 (1968)

Justification: For burnup calculation from destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
62-Sm-152	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	10%	JAERI	Naito	72

Comments: RI : resonance integral

Status: J. Nucl. Energy. 21, 797 (1967); at 3 ± 0.2 MeV, relative to Au(n,γ), ± 15%

Phys. Rev. 152, 1055 (1966); at 24 keV, relative to I(n,γ), ± 10%

NAT 197, 370 (1963); at 30 keV, ± 17%

JIN 24, 749 (1962); at thermal.

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
62-Sm-153	$\sigma(n,\gamma)$		I	Ther.-14 MeV	25%	JAERI	Okasnita	72

Comments:

Status: None, except Walker's private communication (1956) at thermal energy.

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
63-Eu-153	$\sigma(n,\gamma)$ RI		I	Ther.-14 MeV	5%	JAERI	Okashita	72

Comments: RI : resonance integral

Status: Washington Conf. P.837 (1968), Present status of error is at least ± 8%.

Soviet J. of Nucl. Phys. 7, 310 (1968).

Phys. Rev. 75, 1500 (1949); At thermal, error is ± 15%.

Justification: For burnup calculation from nondestructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
63-Eu-154	$\sigma(n,\gamma)$ RI		I	Thermal	5%	JAERI	Okashita	72

Comments: RI : resonance integral

Status: Phys. Rev. 75, 1500 (1949)

The data is old, and the error assigned is ± 15%.

Justification: For burnup calculation from non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-236	$\sigma(n,\gamma)$		I	Thermal	3%	JAERI	Naito	72
				Ther.-14 MeV	10%			

Comments:

Status: AERE-R 6761 (1971)

Nucl. Sci. Eng. 32, 265 (1968) ; at thermal, ±~8%

Nucl. Phys. A141, 577 (1970) ; at thermal, ±~5%

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	$\sigma(n,\gamma)$		I	Thermal	3%	JAERI	Naito	72
				Ther.-14 MeV	10%			

Comments:

Status: Nucl. Sci. Eng. 45, 25 (1971) ; 0.02 eV - 30 keV

Nucl. Sci. Eng. 40, 306 (1970) ; 0.02 eV - 30 keV, at least ± 10%

70 Hels. 1, 315 (1970) ; 100 eV - 30 keV, ± 12~18%

Nucl. Sci. Eng. 12, 169 (1962), 30 keV - 1 MeV, ± 13~30%

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	$\sigma(n,\gamma)$		II	Thermal	2%	JAERI	Naito	72
				Ther.-14 MeV	5%			

Comments:

Status: ORNL-4705 (1971)

J. Inorg. Nucl. Chem. 28, 2467 (1967)

Can. J. Phys. 42, 2063 (1964)

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-242	$\sigma(n,\gamma)$		I	Thermal	5%	JAERI	Naito	72
				Ther.-14 MeV	10%			

Comments:

Status: Reports Idaho OP-office 1407, 63 (1970)
Can. J. Phys. 48, 716 (1970)
DP-MS--67-112 (1968)
Arkiv for Fysik 36, 509 (1967)

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
95-Am-241	$\sigma(n,\gamma)$		II	Thermal	5%	JAERI	Naito	72
				Ther.-14 MeV	10%			

Comments:

Status: Nucl. Phys. A102, 443 (1967) ; 300 keV - 6.5 MeV,

Nucl. Phys. A134, 541 (1969) ; 300 keV - 4 MeV, ± 11~30%

Bull. Inf. Cent., Obninsk 4, 337 (1967) ; thermal ± 10%.

Justification: For burnup calculation of a Pu loaded thermal reactor

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
95-Am-242	$\sigma(n,\gamma)$		I	Thermal	10%	JAERI	Naito	72
				Ther.-14 MeV	20%			

Comments:

Status: Data is old.

Phys. Rev. 85, 135 (1952)

Phys. Rev. 81, 893 (1951)

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	α		I	Thermal	1%	JAERI	Naito	72
				Ther.-14 MeV	5%			

Comments:

Status: NCSAC-42, 199 (1971)
EANDC(E), 140U (1971)
Nucl. Sci. Eng. 45, 37 (1971)
Nucl. Sci. Eng. 44, 180 (1971)
Nucl. Sci. Eng. 40, 306 (1970), and many others.

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	α		I	Thermal	1%	JAERI	Naito	72
				Ther.-14 MeV	5%			

Comments:

Status: Nucl. Sci. Eng. 44, 180 (1971) ; epithermal measurement (3 eV up)

KAPL-P-3438 (1968) ; Preliminary

AERE-R 5166 (1967)

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	ν		I	Thermal epi-Thermal	0.5%	JAERI	Naito	72

Comments:

Status: Yadernaya Fizika 14, 927 (1971)
NCSAC-42, 130 (1971)
ORNL-4705 (1971)

Justification: For burnup calculation of a Pu loaded thermal reactor.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 44-Ru-106		1	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
E.K. Bonyushkin et al., AEC-TR-4682 (1960)
M.A. Bak et al., Atomnaya Energiya 6, 577 (1959)
L.E. Weaver et al., USNRDL-TR-633 (Mar. 5, 1963)
S. Katcoff, Nucleonics, 18, No.11, 201 (Nov. 1960)
H.R. Gunten, Actinide Rev., 275 (1969)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 54-Xe-133		1	En: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 55-Cs-134		II	E_n: FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 55-Cs-137		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
L.E. Weaver et al., USNRDL-TR-633 (Mar. 5, 1963)
E.K. Bonyshkin et al., AEC-TR-4682 (1960)
H.R. Von Gunten, Actinide Rev., 275 (1969)
B.F. Rider et al., GEAP-5505, June 30 (1967)
H.B. Levy et al., Phys. Rev., 124 544 (1961)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 58-Ce-141		1	En: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
S. Katcoff, Nucleonics, 18 No.11, 201 (Nov. 1960)
E.K. Bonyshkin et al., AEC-TR-4682 (1960)
H. Farrar and R.H. Tomlinson, Nucl. Phys. 34 367 (1962)
H.G. Hicks et al., Phys. Rev., 128 No.2, 700 (1962)
M. Brosesti et al., J. Inorg. Nucl. Chem., 29 1189 (1967)
H.R. Von Gunten, J. Inorg. Nucl. Chem., 31 2273 (1969)
F.L. Lisman et al., Nucl. Sci. and Eng., 42 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 58-Ce-144		1	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
S. Katcoff, Nucleonics, 118 No.11 (Nov. 1960)
H.G. Hicks et al., Phys. Rev., 128, 700 (1962)
W. Davies et al., Radiochim. Acta, 12 173 (1969)
H.R. von Gunten, Actinide Rev., (1969)
F.L. Lisman et al., Nucl. Sci. Eng., 42 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 59-Pr-142		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-143		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-144		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-145		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-146		1	E_n: FRS, & HE	1%	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-147		1	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
L.R. Bunney et al., Prod. 2nd. Geneva Conf. 15, p 449 (1959)
H.G. Hicks et al., Phys. Rev. 128, 700 (1962)
D.R. Nethaway et al., Phys. Rev. 182, 1251 (1969)
H.B. Levy et al., Phys. Rev., 124, 544 (1961)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-148		1	E_n: FRS & HE	1%	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 60-Nd-150		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 62-Sm-152		II	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
F.L. Lisman et al., Nucl. Sci. Eng., 42, 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 64-Sm-153		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154
D.W. Engelkemir et al., Paper 205 and 217 in Radiochemical Studies, 9
L. Winsberg, Paper 196 in Radiochemical Studies, 9
H.G. Petrow and G. Rocco, Phys. Rev., 96 No.6 1614 (1954)
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D.R. Nethaway et al., Phys. Rev., 182 1251 (1969)
H.B. Levy et al., Phys. Rev., 124 544 (1961)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-235	Fission Yield of 63-Eu-154		II	E_n: TH, FRS, FS, & HE	50%	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 44-Ru-106		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
W.H. Walker, CRRP-1185 (AECL-2111) (Nov. 1964)
E.K. Bonyushkin et al., AEC-TR-4682 (1960)
S. Katcoff, Nucleonics, 18 No.11, 201 (Nov. 1960)
L.E. Weaver et al., USNRDL-TR-633 (Mar. 5, 1963)
H.R. Gunten, Actinide Rev., 275 (1969)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 54-Xe-133		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

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R.H. James, Radiochim. Acta, 3 76 (1964)

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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 55-Cs-134		II	E_n: FS & HE	50 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 55-Cs-137		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

S. Katcoff, Nucleonics, 18 No.11 201 (Nov. 1960)

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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 58-Ce-141		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 58-Ce-144		II	E_n : FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
S. Katcoff, Nucleonics, 18 No.11 201 (1960)
C.K. Mathews, Ph D Thesis, McMaster Univ. (1964)
H.R. von Gunten, Actinide Rev. (1969)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 59-Pr-142		II	E_n: FS & HE	50 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 60-Nd-143		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

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B.F. Rider et al., GEAP-5505 (1967)

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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 60-Nd-144		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

C.K. Mathews, Ph D Thesis, McMaster Univ. (1964)

B.F. Rider et al., GEAP-5505 (1967)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 60-Nd-145		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

C.K. Mathews, Ph D Thesis, McMaster Univ. (1964)

B.F. Rider et al., GEAP-5505 (1967)

M. Robin, Paper 4, UK. Conf, Chemical Nucl. Data, Sept. 20-22, 1971, London

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 60-Nd-146		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 60-Nd-147		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

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H.R. von Gunten, Activides Rev., p.275 (1969)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield 60-Nd-148		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

C.K. Mathews, Ph D Thesis, McMaster Univ. (1964)

M. Robin, paper 4, UK Conf. Chemical Nuclear Data, Sept. 20-22, 1971, London.

B.F. Rider et al., GEAP-5505 (1967)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 60-Nd-150		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

C.K. Mathews, Ph D Thesis, McMaster Univ. (1964)

M. Robin, Paper 4, UK Conf, Chemical Nuclear Data, Sept. 20-22, 1971, London

B.F. Rider et al., GEAP-5505 (1967)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 62-Sm-152		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

C.K. Mathews, Ph D Thesis, McMaster Univ. (1964)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 64-Sm-153		II	E_n: FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

H.B. Levy et al., Phys. Rev., 124 544 (1961)

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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
92-U-238	Fission Yield of 63-Eu-154		II	E_n: FS & HE	50 %	JAERI (Japan)	Okashita	72

Comments: FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 44-Ru-106		1	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
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M.A. Bak et al., Atomnaya Energiya, 6, 577 (1959)
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I.F. Croall, AERE-R-5086, (1967)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 54-Xe-133		II	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 55-Cs-134		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 55-Cs-137		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

B F. Rider et al., GEAP-5505 (June 1967)

E.K. Bonyshkin et al., Atomnaya Energiya, 10 No.1, 13 (1961)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 58-Ce-141		1	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 58-Ce-144		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 59-Pr-142		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-143		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

B.F. Rider et al. GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-144		1	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al. GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-145		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS : Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al. GEAP-5505 (1967) (Epi-Cd-neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-146		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al. GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-147		1	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
L.R. Bunney et al., Proc. 2nd Geneva Conf. 15, 444 (1959)
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Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-148		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd-neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 60-Nd-150		1	E_n: FRS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

HE ; High energy neutrons (14-15 MeV)

Status: B.F. Rider et al., GEAP-5505 (1967) (Epi-Cd neutrons)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 62-Sm-152		II	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

F.L. Lisman et al., Nucl. Sci. Eng., 42, 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 63-Sm-153		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: E.P. Steinberg and M.S. Freedman, paper 219 in Radiochemical Studies 9
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Bunney et al., Proceedings of the 2nd. Int. Conf. on the peaceful uses of Atomic Energy 15, 444 (1959) New York

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-239	Fission Yield of 63-Eu-154		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 44-Ru-106		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

F.L. Lisman et al., Nucl. Sci. and Eng., 42 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 54-Xe-133		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.

H. Farrar et al., Can. J. Phys., 42 2063 (1964)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Field of 55-Cs-134		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 55-Cs-137		1	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 58-Ce-141		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
H. Farrar et al., Can. J. Phys., 42, 2063 (1964)
I.F. Croall and H.H. Willis, AERE-R-6154 (1969)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 58-Ce-144		1	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
H. Farrar et al., Can. J. Phys., 42 2063 (1964)
L.J. Kirby, HW-77609 (1963)
F.L. Lisman et al. Nucl. Sci. Eng., 42 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 59-Pr-142		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-143		II	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)

FS ; Fission spectrum neutrons

HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-144		II	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-145		II	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-146		II	E_n: FRS, FS & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-147		II	E_n; TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
H. Farrar et al., Can. J. Phys., 42 2063 (1964)
F.L. Lisman et al., Nucl. Sci. Eng., 42, 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-148		II	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Nd-150		II	E_n: FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 60-Sm-152		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: Insufficient accuracy is quoted in NEDO-12154.
H. Farrar et al., Can. J. Phys., 42, 2063 (1964)
F.L. Lisman et al., Nucl. Sci. Eng., 42, 191 (1970)

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 62-Sm-153		II	E_n: TH, FRS, FS, & HE	1 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.

Target	Quantity	Variable	Priority	Incident energy	Accuracy	Lab/Org	Requestor	Year
94-Pu-241	Fission Yield of 63-Eu-154		II	E_n: TH, FRS, FS, & HE	50 %	JAERI (Japan)	Okashita	72

Comments: TH ; Thermal neutrons
FRS ; Fast reactor spectrum neutrons (80-800 keV)
FS ; Fission spectrum neutrons
HE ; High energy neutrons (14-15 MeV)

Status: No experimental result has been reported.

Justification: For burn-up calculation from destructive/non-destructive measurement.