



INTERNATIONAL ATOMIC ENERGY AGENCY

# NUCLEAR DATA SERVICES

DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

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IAEA-NDS-55

(Rev. 0)

ACTL-82

The LLNL Neutron Activation  
Cross-Section Library of 1982

Summary of Contents

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ACTL-82

ACTL-82 is a part of the Evaluated Nuclear Data Library (ENDL) of the Lawrence Livermore National Laboratory (LLNL), USA. It contains neutron activation cross-sections for more than 260 target isotopes, for incident neutron energies up to 20 MeV.

The data are given in the ENDL Transmittal Format, see IAEA-NDS-53.

This library supersedes the 1978 version which had been distributed earlier. However, many of the data are still the same as can be seen from the date of evaluation resp. last update, which shows up on the first record of each cross-section table. The 1978 version was documented in

UCRL-50400 vol.18 of 17 Oct. 1978 by  
M.A. Gardner, R.J. Howerton.

From this document, the text pages describing the evaluation techniques, are attached.

ACTL-82:

List of target nuclei for which neutron activation cross-sections up to 20 MeV are given.

<u>Element</u>	<u>Isotopes</u>	<u>Element</u>	<u>Isotopes</u>
1-H	1-3	32-Ge	70, 72, 73, 74, 76
2-He	3	33-As	75
3-Li	6, 7	33-Br	79, 81
4-Be	7, 9	38-Sr	86
5-B	10, 11	39-Y	89
6-C	12, 13	40-Zr	89-97
7-N	14	41-Nb	91-98, 100
8-O	16	42-Mo	90-101
9-F	19	43-Tc	99
11-Na	23	45-Rh	103
12-Mg	23-27	47-Ag	106-110
13-Al	27	48-Cd	111
14-Si	27-31	64-Gd	150, 151
15-P	31	67-Ho	163-166
16-S	31-37	69-Tm	169
17-Cl	34-38	71-Lu	173-177
18-Ar	36-43	72-Hf	179-181, 183
19-K	38-46	73-Ta	179-184, 186
20-Ca	39-49	74-W	179-188
21-Sc	44-48	75-Re	184-188
22-Ti	45-51	77-Ir	194
23-V	47-52	78-Pt	197
24-Cr	49-56	79-Au	193-200
25-Mn	51-58	80-Hg	202-204
26-Fe	53-60	81-Tl	202-205
27-Co	57-64	82-Pb	203-210
28-Ni	57-65	83-Bi	209, 210
29-Cu	62-66	84-Po	210
30-Zn	64	90-Th	230-234
31-Ga	71	92-U	233-240