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DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

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ENDF/B-6 FPY

The ENDF/B-6 fission-product yield sublibraries

by T.R. England and B.F. Rider

released by the U.S. National Nuclear Data Center
in 1991, including revisions up to May 1995

Summary documentation

by H.D. Lemmel

Abstract: The contents and the documentation of the ENDF/B-6 fission-product yield sublibraries which were released in 1991 and updated in 1993 and 1995, are summarized. Copies of the data libraries are available upon request from the IAEA Nuclear Data Section, costfree, on floppy diskette, or CD-ROM. The library is available online within NDIS, the Nuclear Data Information System and also from the WWW pages of the Nuclear Data Section.

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username: IAEANDS for interactive Nuclear Data Information System
usernames: ANONYMOUS for FTP file transfer;
FENDL2 for FTP file transfer of FENDL-2.0;
RIPL for FTP file transfer of RIPL;
NDSONL for FTP access to files sent to NDIS "open" area.
Web: http://www-nds.iaea.or.at

Note:

The IAEA-NDS-reports should not be considered as formal publications. When a nuclear data library is sent out by the IAEA Nuclear Data Section, it will be accompanied by an IAEA-NDS-report which should give the data user all necessary documentation on contents, format and origin of the data library.

IAEA-NDS-reports are updated whenever there is additional information of relevance to the users of the data library.

For citations care should be taken that credit is given to the author of the data library and/or to the data center which issued the data library. The editor of the IAEA-NDS-report is usually not the author of the data library.

Neither the originator of the data libraries nor the IAEA assume any liability for their correctness or for any damages resulting from their use.

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Citation guidelines:

The data library should be cited as follows:

> T.R. England, B.F. Rider, "Evaluation and compilation of fission product yields", report LA-UR-94-3106, (Los Alamos National Laboratory, 1994). ENDF/B-6 fission product yield sublibraries, released 1991, updated 1995, by the U.S. National Nuclear Data Center. Data received on tape from the IAEA Nuclear Data Section.

ENDF/B-6 FPY

ENDF/B-6 fission-product yield sublibraries

by T.R. England and B.F. Rider

ENDF/B-6 is the US Evaluated Nuclear Data Library (see document IAEA-NDS-100). The ENDF/B-6 fission-product yield sublibraries were released on 4 September 1991 by the US National Nuclear Data Center on

tapes 125 and 126 (for neutron induced fission), and
tape 209 (for spontaneous fission).

Revised and supplemented data were released on 1 June 1993 on

tapes 130 and 131 (for neutron induced fission), and
tape 211 (for sponteneous fission).

An update to the Pu-241 data was released on 16 May 1995 on tape 136.

Detailed documentation see:

T.R. England, B.F. Rider: Evaluation and Compilation of Fission-Product Yields, 1993, report LA-UR-94-3106/ENDF-349, Sept. 1994.

This report contains

- The main part with 37 pages of detailed description of the evaluation procedures including tabular data of chain yields etc;

- 137 pages bibliography;

- 6 Appendices with about 1300 pages of all compiled and evaluated data.

This report is available through INTERNET from Los Alamos, USA, under the anonymous node

T2.LANL.GOV subnode YIELDS.

Those who need this report and do not have access to INTERNET can request from the IAEA Nuclear Data Section a full-size printout of the main part and the bibliography, or a magnetic tape copy of the entire report.

The data are in **ENDF-6 format** which is documented in IAEA-NDS-76 Rev. 4.

There are **two sublibraries** of fission-product yield data, one for neutron induced fission, the other for spontaneous fission. Both together have a size of about 100 000 records.

Magnetic tape copies of the files are available costfree upon request.

ENDF/B-6 fission-product yield sublibraries

Table of contents

For each of the following fissioning systems independent and cumulative fission-product yield data are included (MT/MF = 8/454 or 8/459 respectively).

	incident neutrons			
90-Th-227	thermal			
229	thermal			
232		0.5 MeV	14 MeV	
91-Pa-231		0.5 MeV		
92-U-232	thermal			
233	thermal	0.5 MeV	14 MeV	
234		0.5 MeV	14 MeV	
235	thermal	0.5 MeV	14 MeV	
236		0.5 MeV	14 MeV	
237		0.5 MeV		
238		0.5 MeV	14 MeV	spont.
93-Np-237	thermal	0.5 MeV	14 MeV	
238		0.5 MeV		
94-Pu-238		0.5 MeV		
239	thermal	0.5 MeV	14 MeV	
240	thermal	0.5 MeV	14 MeV	
241	thermal	0.5 MeV		
242	thermal	0.5 MeV	14 MeV	
95-Am-241	thermal	0.5 MeV	14 MeV	
242m	thermal			
243		0.5 MeV		
96-Cm-242		0.5 MeV		
243	thermal	0.5 MeV		
244		0.5 MeV		spont.
245	thermal			
246		0.5 MeV		spont.
248		0.5 MeV		spont.
98-Cf-249	thermal			spont.
250				
251	thermal			spont.
252				
				spont.
99-Es-253				
254	thermal			
				spont.
100-Fm-254				
255	thermal			spont.
256				

Note: The original tape 126 included Pu-241 data for thermal and 0.5 MeV neutrons. The revised tape 131 includes for Pu-241 data for thermal neutrons only. Tape 136 included again the inadvertently omitted 0.5 MeV data.