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Memo CP-C/301 (Date updated)

DATE: April 18, 2002
TO: Distribution
FROM: V. McLane
SUBJECT: Modification of Dictionary 8 and 27
(Reply to Memo CP-A/124)

NNDC and NDS are currently in the process of evaluating links between the nuclear reaction and nuclear structure databases. Given the limitation on manpower, it seems illogical to duplicate the information stored in these databases. Therefore, I am making the following modification to the proposal of Memo CP-A/124.

1. Eliminate Dictionary 27, as proposed.
2. Modify the Dictionary 8, as follows:
 - Key: Z-symbol (A6)
 - Columns 1-3: integer Z (I3)
 - Columns 4-5: symbol (A2)
 - Columns 6-25: Element name (A20)
 - Columns 26-32: Range of known nuclei (I3,'-',I3)
 - Column 34: Natural mixture allowed flag (A1).
 - Column 35-43: Isotopes not used in SF3 or SF4 (3I3).

We would add 0-G and 0-NN to dictionary 8 (1-D and 1-T need not be added as they will not exist in the new CINDA system).

The Compound dictionary would be modified to eliminate the CMP and OXI codes which may be added to any nuclide. I am also suggesting adding stainless steel.

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The nuclear structure databases would be used to check on whether a nuclide is stable or radioactive and whether a known isomer exists.

Examples of records in the reformatted dictionaries follow.

Dictionary 8 (Elements)

0-G	0G Gamma ray	0- 0	0
0-NN	0NNNeutron	1- 1	1
1-H	1H Hydrogen	1- 6 N	1 2 3
2-HE	2HEHelium	3- 10 N	3 4
3-LI	3LILithium	4- 12 N	
4-BE	4BEBeryllium	5 -14	
5-B	5B Boron	7- 19 N	
6-C	6C Carbon	8- 22 N	
7-N	7N Nitrogen	10- 24 N	
8-O	8O Oxygen	12- 26 N	
9-F	9F Fluorine	14- 29	
10-NE	10NENeon	16- 32 N	
11-NA	11NASodium	18- 35	
12-MG	12MGMagnesium	20- 37 N	
13-AL	13ALAluminium	21- 40	
14-SI	14SISilicon	22- 42 N	
15-P	15P Phosphorus	24- 46	
16-S	16S Sulfur	26- 49 N	
17-CL	17CLChlorine	28- 51 N	
18-AR	18ARArgon	30- 53 N	
19-K	19K Potassium	32- 54 N	
20-CA	20CACalcium	34- 56 N	

Dictionary 9 (Compounds)

1-H-BNZ	Benzene	C6H6	
1-H-CXX	Organic Compound		
1-H-MTH	Methane	CH4	
1-H-PFN	Paraffin)		
1-H-PHL	Phenyl		
1-H-PLE	Polyethylene		
1-H-TXX	Tritium Compound		
1-H-WTR	Water, Ice, Steam	H2O	
7-N-AIR	Air		
7-N-AMM	Ammonium Compound		
26-FE-SS	Stainless Steel		(added)
40-ZR-ALY	Zircalloy		
40-ZR-HYD	Zirconium Hydride		