

# Recommended Nuclear Decay Data

Y-88

Decay Mode: EC, $\beta^+$		Half-Life: (106.630 $\pm$ 0.025) d			[2]
Radiation Type		Energy (keV)	Intensity (%)		Ref.
Auger-L		1.79	105	6	[3]
Auger-K		12.5	26.2	8	[3]
$\beta^+$ max		754.7	0.20	2	[3]
X-ray L	$\Sigma$	1.82	2.5	4	[2]
X-ray K $\alpha$	$\Sigma$	14.14	52.2	6	[2]
X-ray K $\beta$	$\Sigma$	15.8	9.4	2	[2]
$\gamma$	Annih.	511.0	0.42	4	[2]
$\gamma$		850.6	0.065	13	[2]
$\gamma$		898.04	94.0	3	[2]
$\gamma$		1382.2	0.021	6	[2]
$\gamma$		1836.1	99.33	3	[2]
$\gamma$		2734.0	0.61	2	[2]
$\gamma$		3219.7	0.0071	20	[2]

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## ■ Decay Mode

$\alpha$	Alpha
$\beta^-$ , $\beta^+$	Beta
EC	Electron capture
IT	Isomeric transition

## ■ Half-Life

s	Seconds
m	Minutes
h	Hours
d	Days
y	Years

## ■ Energy

All energies are given in keV.  
Normally there are energies listed with an intensity  $\geq 1\%$ .

## ■ Radiation Type

Auger-L/K	L or K-shell auger electron
ce-K-1	K-shell conversion electron transition 1
ce-L-2	L-shell conversion electron transition 2
$\alpha$	Alpha particle
$\beta^-$ max, $\beta^+$ max	Beta particle (maximal energy)
$\beta^-$ av, $\beta^+$ av	Beta particle (average energy)
X-ray L	L X-ray
X-ray $K\alpha$ , $K\beta$	K X-rays
$\gamma$	Gamma ray
$\gamma$ Annih.	Annihilation radiation
$\Sigma$	Signifies weighted mean energies and intensities

## ■ Intensity

Values are given in percent. The format used for the uncertainties in the listed values can be illustrated by the following examples:

$$1.2 \quad 56 \quad = \quad 1.2 \pm 5.6$$
$$1.23 \quad 56 \quad = \quad 1.23 \pm 0.56$$

## ■ References

- [1] PTB-6.11-97-1, Braunschweig, Oktober 1997
- [2] PTB-Ra-16/5, Braunschweig, Mai 2000
- [3] LMRI. Table de radionuclides. 1982 ff
- [4] NCRP Report No.58, 2nd Edition, February 1985
- [5] Table de Radionuclides, BNM-CEA/DTA/LPRI Commissariat à l'Énergie Atomique – France 1999
- [6] National Nuclear Data Center USA, Brookhaven National Laboratory Upton N.Y.
- [7] Table of Isotopes, 8th Edition, 1996
- [8] BNM-CEA/DTA/DAMRI Nuclear and Atomic Decay Data ; 19/12/98

## **Eckert & Ziegler Nuclitec GmbH**

Gieselweg 1  
38110 Braunschweig  
Deutschland

Tel. +49 5307 932-555  
Fax +49 5307 932-194  
[www.nuclitec.de](http://www.nuclitec.de)