

Probably the best TLD's in the world

The most typical TLD Detectors:

Material	Code name			Physical form / shape	Dimensions ¹	Standard thickness	
	natural Li	⁷ Li	⁶ Li				
LiF: Mg,Ti	MTS-N	MTS-7	MTS-6	circular pellet	∅ 4.5 mm	0.9 mm	
	MTS-Ns	MTS-7s	MTS-6s	thin-layer pellet	∅ 4.5 mm	0.05 mm (active layer)	
	MTS-100	MTS-700	MTS-600	square chip	3.2x3.2 mm	0.9 mm, 0.4 mm	
	MTS-100M	MTS-700M	MTS-600M	micro-cube	1x1 mm	1 mm	
	MTS-100D	MTS-700D	MTS-600D	rod	1x1 mm	6 mm (length)	
	MTS-Nc	MTS-7c	MTS-6c	carbon-loaded	∅ 4.5 mm	0.9 mm	
	MT-N	MT-7	MT-6	powder	grains: 80-200 μm		
	MTS-100R	MTS-700R	MTS-600R	rounded corner chip	3.5x3.5 mm	0.9 mm, 0.4 mm	
	LiF: Mg,Cu,P	MCP-N	MCP-7	MCP-6	circular pellet	∅ 4.5 mm	0.9 mm
		MCP-Ns	MCP-7s	MCP-6s	thin-layer pellet	∅ 4.5 mm	0.05 mm (active layer)
MCP-100		MCP-700	MCP-600	square chip	3.2x3.2 mm	0.9 mm, 0.4 mm	
MCP-100M		MCP-700M	MCP-600M	micro-cube	1x1 mm	1 mm	
MCP-100D		MCP-700D	MCP-600D	rod	1x1 mm	6 mm (length)	
MCP-Nc		MCP-7c	MCP-6c	carbon-loaded	∅ 4.5 mm	0.9 mm	
MCP-Np		MCP-7p	MCP-6p	powder	grains: 80-200 μm		
MCP-100R		MCP-700R	MCP-600R	rounded corner chip	3.5x3.5 mm	0.9 mm, 0.4 mm	

(1) - Other dimensions are available on request

The most typical TLD Cards configurations:

Code	Position 1	Position 2	Position 3	Position 4
0001				MTS-100 / MTS-N
0110		MTS-100 / MTS-N	MTS-100 / MTS-N	
0111		MTS-100 / MTS-N	MTS-100 / MTS-N	MTS-100 / MTS-N
6776	MTS-600 / MTS-6	MTS-700 / MTS-7	MTS-700 / MTS-7	MTS-600 / MTS-6
7776	MTS-700 / MTS-7	MTS-700 / MTS-7	MTS-700 / MTS-7	MTS-600 / MTS-6
01h1h0		MCP-100 / MCP-N	MCP-100 / MCP-N	
7h7h7h6h	MCP-700 / MCP-7	MCP-700 / MCP-7	MCP-700 / MCP-7	MCP-600 / MCP-6

TLD chips and pellets, sealed in fluoropolymer foil, are available on request

Exclusive distributor:

RadPro International GmbH
 ...Radiation Protection
 for Radiation Professionals...

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Thermoluminescent Detectors and Cards



TLD Materials and Their Dosimetric Properties

Lithium fluoride thermoluminescent phosphor, in the form of powder, solid pellets and chips, is recognized universally as the "golden standard" for applications in radiation protection dosimetry, monitoring of environmental radiation and medical dosimetry.



MTS-N

MTS-N (LiF:Mg,Ti) has been produced since 1972 in the form of solid pellets, chips or powder, using a unique method developed by Prof. Tadeusz Niewiadomski at the Institute of Nuclear Physics, Kraków, Poland.

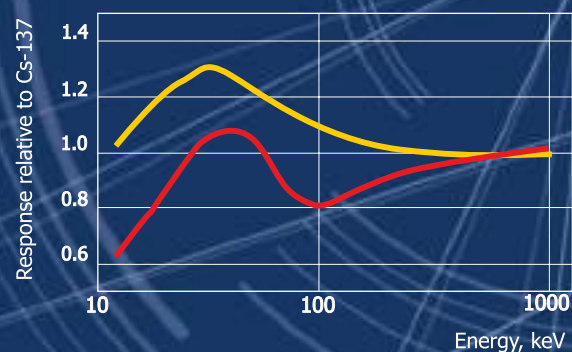
- fully exchangeable with LiF:Mg,Ti phosphors, chips and pellets produced by other companies,
- used world-wide in radiation protection, environmental monitoring and clinical dosimetry.

MCP-N

MCP-N type ultra-sensitive thermoluminescent LiF doped with magnesium, copper and phosphorus (LiF:Mg,Cu,P), available as solid detectors or in the form of powder.

- 30 times more sensitive to gamma ray doses than MTS-N,
- unmatched for environmental monitoring and personal dosimetry.

Photon energy response of MCP-N and MTS-N



TLD Powders

TLD powders for dosimetry in medical physics:

- beam dosimetry,
- TLD Quality Assurance for postal reference dosimetry,
- typical grain size 80-200 μm (customer specified).



MCP-Ns

MCP-Ns (LiF:Mg,Cu,P) thin active-layer ultra-sensitive TLD designed to measure Hp(0.07) in external fields of weakly penetrating radiation. Each pellet consists of a thin radiation-sensitive part, of 8.5 $\text{mg}\cdot\text{cm}^{-2}$ effective thickness, bonded to a thick, mechanically stable, non-luminescent LiF matrix.

- flat energy response after X-ray and β -ray doses,
- high sensitivity-reliable measurements of Hp(0.07) in the μGy range.



TLD Cards

Our Aluminum dosimetric cards, with TL pellets or chips sealed in fluoropolymer (e.g. PTFE), can be evaluated in all compatible hot-gas readers. One to four detectors in arbitrary configurations and sealed in fluoropolymer foil are mounted into the card. Different shape, thickness and isotopic composition of detectors (^7Li , ^6Li , natural Li), different colors and card numbers are available on request.

In addition, our TLD's can be used in other dosimetric cards, including RADOS type cards.

Tailored to your needs

The unique feature of our company is an ability to produce detectors of dimension, active-layer thickness, isotopic composition and sensitivity, adjusted to any individual requirement of our Customers.

- available shapes: pellets, square chips, round-corner chips, microcubes, rods
- available dimensions: diameter 1-12 mm, thickness 0.3-1.5 mm
- chips and pellets available sealed in fluoropolymer foil (e.g. PTFE)
- our miniature detectors are ideal for high spatial resolution dosimetry
- we can vary the effective thickness of the sensitive layer in our MCP-Ns detectors from 7 $\text{mg}\cdot\text{cm}^{-2}$ to 1000 $\text{mg}\cdot\text{cm}^{-2}$
- read out with any standard TL reader (planchete or hot gas) as bare detectors or in dosimetric cards.

Beta energy response of MCP-Ns

