

Datasheet Chloramphenicol-³⁷Cl₂

Reference number : CEC/MAT : 07

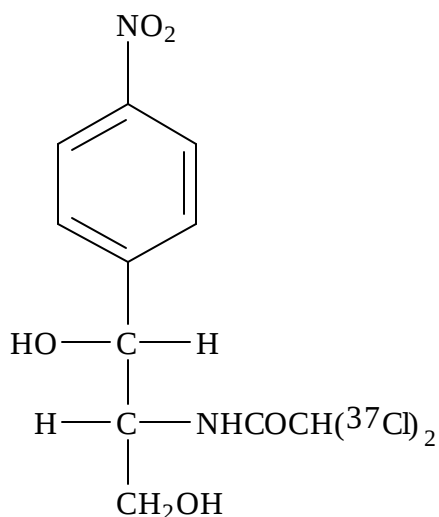
Date of preparation : 1993.11.23

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source : RIVM

“Bank of Reference Standards”

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CHLORAMPHENICOL- $(^{37}\text{Cl})_2$

Name : D(-)-Threo-2,2-di ^{37}Cl oro-N-[β -hydroxy- α -(hydroxymethyl)-p-nitrophenethyl]acetamide

Synonym : chloramphenicol- $^{37}\text{Cl}_2$

Molecular formula : $\text{C}_{11}\text{H}_{12}\text{O}_5\text{N}_2^{37}\text{Cl}_2$

Cas # : not available

Molecular weight : 326.16

Long term stability tested on 1997.10.02 : $99.9 \pm 6.4 \%$
(storage 4°C , analysis HPLC-UV, 6 tests on 2 ampoules)

Last update : 1998.01.06

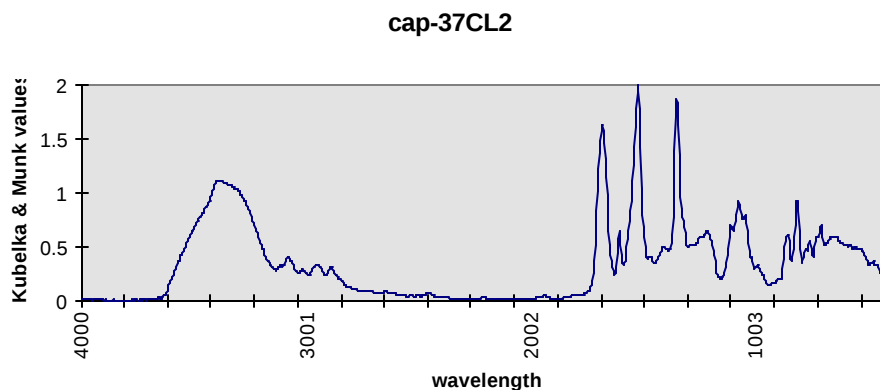
Methods used for characterization

- I IR spectroscopy
- II Mass spectrometry
- III HPLC-UV spectroscopy
- IV ^1H -NMR spectrometry
- V Homogeneity and stability obtained with GC-MS

I IR-SPECTROSCOPY

Instrument: Bruker IFS-55 FTIR; detector DTGS

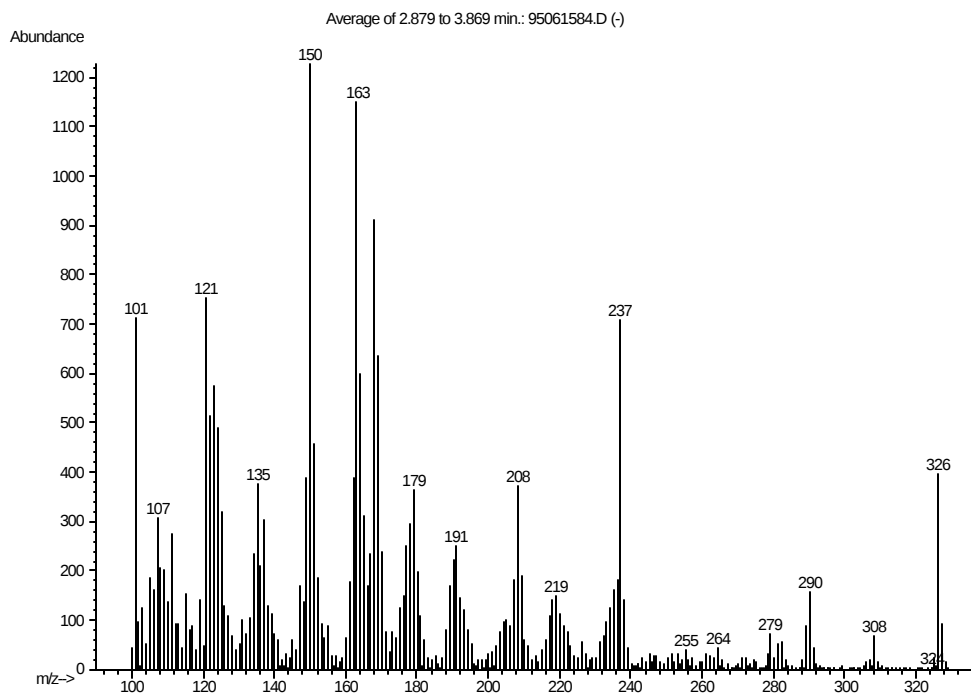
Sampling technique: KBr-tablet.



II MASS-SPECTROMETRY

Instrument: Hewlett Packard 5989 A MS

MS spectrum, DIP = direct inlet probe

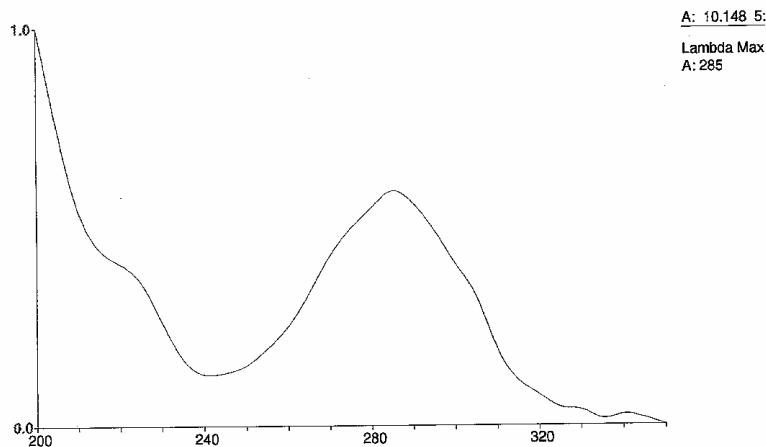


III HPLC-UV SPECTROSCOPY

Instrument: TSP spectrasystem UV2000; resolution 2nm.

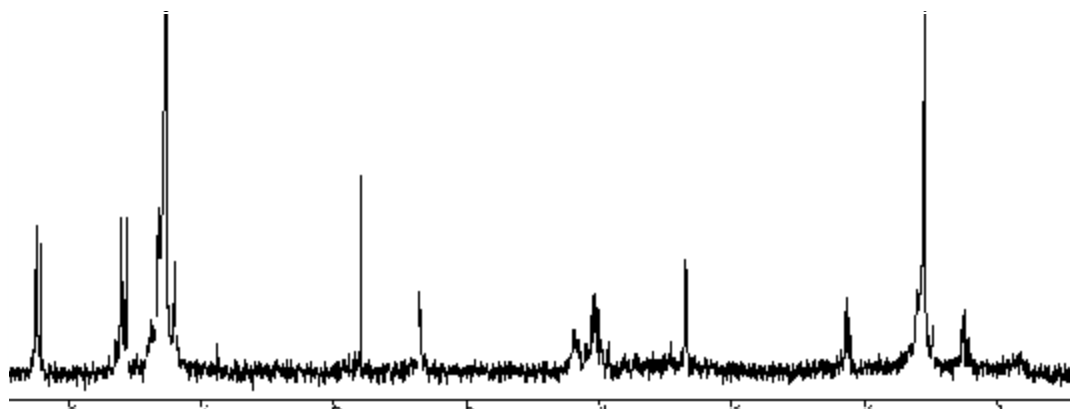
dataset CEC-MAT reference standard material CAP-³⁷C₂, page 2 of 4

HPLC eluens: methanol/water (70:30 v/v)
HPLC column: Lichrocart 125-4 hplc cartridge



IV ^1H -NMR SPECTROMETRY

Instrument: FT-NMR Jeol GSX; 270 MHz, 5 mm probe, solvent DMSO



Chemical shifts (ppm)	Amount of protons (multiplicity)	Designation
3.50	2 (m)	CH_2OH
3.95	1 (m)	CHNH
5.10	2 (m)	OH (2x)
6.10	1 (m)	CHOH
6.48	1 (s)	CHCl_2
7.92	4 (m)	arom.
8.38	1 (m)	NH

V HOMOGENEITY AND STABILITY

Stability and homogeneity test of CAP-³⁷Cl₂,

CEC/ MAT: 07

temp	t= 0 months homogeneity (n = 10) µg (m ± SD)	t=1,5 months (n =2) µg (m ± SD)	t = 3 months (n = 2) µg (m ± SD)	t = 6 months (n = 2) µg (m ± SD)	t= 12 months (n = 2) µg (m ± SD)	t= 24 months (n = 2) µg (m ± SD)
4 °C	(109 ± 10)	(102 ± 4)	(103 ± 1)	(94 ± 5)	(94 ± 4)	(107 ± 2)
20 °C		(107 ± 6)	(103 ± 1)	(101 ± 1)	(98 ± 1)	(105 ± 2)
37 °C		(98 ± 3)	(102 ± 1)	(101 ± 5)	(99 ± 8)	(102 ± 2)

