Specification

Doxycycline hyclate *BioChemica* A2951

Physical Description:	Solid
Product Code:	A2951
Product Name:	Doxycycline hyclate *BioChemica*
Specifications:	Assay (HPLC, calc. on H_2O and EtOH free subst.): min. 95 % Solubility (1 %; H_2O): clear, yellow-green Ethanol: max. 7 % Water: max. 5 %
Hazard pictograms	
WGK:	1
Storage:	2-8°C protected from light
Signal Word:	Attention
GHS Symbols:	GHS07 GHS08
H Phrases:	H302+H332 H315 H319 H335 H361 H362
P Phrases:	P260 P263 P280

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Specification

Doxycycline hyclate *BioChemica* A2951

	P281 P321
Molecular Formula:	$C_{22}H_{25}ClN_2O_8 \cdot ½H_2O \cdot ½C_2H_6O$
M:	512.94 g/mol
CAS:	24390-14-5
EINECS:	234-198-7
CS:	29413000

Comment

Doxycycline is a member of the Tetracycline family of antibiotics and is active against grampositive and gramnegative germs. Accordingly, it shows the same mechanism of action, i.e. an inhibition of the protein synthesis at the ribosomes. In the TET expression system, Doxycycline may replace Tetracycline. The working concentration for the inactivation of tTA in double-stable cell lines is 1 - 20 ng/ml in the culture medium (acc. to ref. 1). **Solubility and stability**: The crystalline substance of Doxycycline is stable. The hyclate salt of Doxycycline is watersoluble. Stability of Doxycylcine in aqueous solutions depends on the pH value: an acidic pH value increases stability (more than 30 days at ambient temperature without loss of activity at pH 1 - 2,5). At pH 7 and ambient temperature, it is stable for more than 1 week. Doxycycline forms complexes with calcium ions, which leads to an inactivation of the antibiotic. Avoid high calcium concentrations in your assay.

Bibliography

(1)Sambrook, J. & Russell, D.W. (2001) *Molecular Cloning:* A Laboratory Manual, 3rd Edition. Page 17.59. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.

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