

## HPLC Derivatization – Application Overview

Applications	Special Applications	Reagent	Description	Reaction Type	Pre-column Derv.(V), Post-column Derv.(N), Both(B)	Wavelength	Cat. No.
Primary amines, amino acids, secondary amines (via Hypochlorite)	Aminoglycosides, Gentamicin, Neomycin, biogenic Amines, amino acids	Phthaldialdehyde	BioChemika, for fluorescence, ≥ 99.0% (HPLC)	Isindole-reaction with OPA, boric acid, mercaptoethanol	B	340 nm Ex. 440 nm Em.	79760
Primary Amine, amino acids	Sulfonamides, Amoxicillin, Ampicillin, Gentamicin	Fluram	BioChemika, for fluorescence, ≥ 99.0% (UV)	Condensation to fluorescent pyrrolidone	B	395 nm Ex. 495 nm Em.	47614
Primary and secondary Amines, biogenic, Amines, amino acids	Secondary amines, Erythromycin, Gentamicin, Neomycin, Pirlimycin	Fmoc chloride	BioChemika, for fluorescence, ≥ 99.0% (HPLC)	Nucleophilic substitution to fluorescent chloroformiat-derivative	V	265 nm Ex. 315 nm Em.	23184
Primary and secondary amines, biogenicamines, amino acids, phenoles	Biogenic amines, Stilbene derivatives, Gentamicin	Dansyl chloride	BioChemika, for fluorescence, ≥ 99.0% (HPLC)	Nucleophilic substitution to fluorescent dansyl-derivative	V	360 nm Ex. 420 nm Em.	39220
Primary aromatic amines, hydrazines	Sulfonamides	4-(Dimethyl-amino)benzaldehyde solution (Ehrlich's reagent)	puriss. p.a., for the determination of hydroxyproline, ≥ 99.0% (HPLC)	Condensation with amines to schiff base	B	450 nm	39070
Primary aromatic amines	Sulfonamides, Clenbuterol, Mabuterol, Cimaterol, Brombuterol, Chloramphenicol (after reduction with zinc)	Bratton-Marshall (N-(1-naphthyl) ethylene-diamine-dihydrochloride)	ACS reagent, >98%	Diazotation of aromatic amines	B	550 nm	222488
Primary aliphatic and secondary aliphatic and aromatic amines	Streptomycin, Dihydrostreptomycin, Amphetamines, amino acids	Sodium 1,2-naphthoquinone-4-sulfonate (Folin's Reagent)	purum p.a., for spectrophotometric det. of isonicotic hydrazide, amines and amino acids, ≥ 97.0% (T)	Michael-Addition yielding the quinone imin acc. to Folin, Hartke and Lohmann	B	260 nm Ex. 435 nm Em.	70382
Polyether antibiotics in general	Monensin, Semduramicin, Narasin, Salinomycin	Vanillin (4-Hydroxy-3-methoxybenzaldehyde)	ReagentPlus, 99%	Decomposition reaction to the dye	N	520 nm	V1104
α-Aminocarboxylic acids	Paromomycin	1-Fluoro-2,4-dinitrobenzene (Sanger Reagent)	≥ 99%	Nucleophilic aromatic substitution	V	350 nm	D1529
Amino acids	amino acids, (Streptomycin)	Ninhydrin	ACS reagent	Condensation of primary amines to Aza-Oxonol	N	440 nm	151173
Steroides, Makrolid-Antibiotics	Josamicin, Rokitamycin, Progesterone	Dansylhydrazine	BioChemika, for fluorescence, ≥ 95.0% (HPLC)	Forming of a dansylhydrazone with an aldehyde	V	350 nm Ex. 540 nm Em.	30434
Amprolium	Amprolium	Potassium hexacyanoferrate(III)	BioUltra, ≥ 99.0% (RT)	Redox-reaction to fluorescent complex	N	370 nm Ex. 470 nm Em.	60299
Penicillines	Amoxicilline, Ampicilline, Penicilline G, Cloxacilline, Penicilline V, Oxacilline, Dicloxacilline, Cephalexine, Cephadrine	Mercury (II) chloride	puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥ 99.5% (calc. to the dried substance)	Nucleophilic addition of imidazol	V	325 nm	31005
Penicillines	Amoxicilline, Ampicilline	Formaldehyde solution	puriss. p.a., ACS reagent, ≥ 36.5%	Fluorescent Pyrazine-derivative	V	350 nm Ex. 420 nm Em.	33220
Avermectine	Ivermectine, Moxidectine	Trifluoroacetic anhydride	puriss. p.a., derivatization grade (for GC), ≥ 99.0% (GC)	Aromatization by elimination	V	365 nm Ex. 465 nm Em.	91719