

Aryl Amine Determination Standards 禁用有害偶氮染料



欧盟颁布指令：欧盟市场上销售的进出口相关产品中所含 22 种偶氮染料不得超过 30PPM 的限量。此指令于 2003 年 9 月 11 日后开始执行。

欧盟成员国

奥地利、比利时、丹麦、芬兰、法国、德国、希腊、爱尔兰、意大利、卢森堡、荷兰、葡萄牙、西班牙、瑞典、英国。

背景知识：

偶氮染料是一类包含一个或一个以上的偶氮键，并链接至少一个芳香胺的人工合成染料。目前市场上流通的合成染料品种约 2000 种，其中约 70% 的合成染料涉及偶氮结构。偶氮染料主要因其可还原出致癌芳香胺从而危害人类健康。

1994 年 7 月德国修订保障消费者法案，首次以立法的形式，禁止生产、使用和销售可还原出致癌芳香胺的偶氮染料。目前，禁用偶氮染料的监控已成为国际纺织品与服装贸易中最重要的品质控制项目之一，也是生态纺织品最基本的质量指标之一。

您需要出口产品、检测此类物质吗？

以下的单标、套标、混标可以助您一臂之力！

让您的检测易如反掌，让您的产品畅行欧洲！

Solutions to meet a new European Standard Method under development for the determination of Aryl Amines.

Aryl Amine Standards

Analyte	100 µg/mL in AcCN 1 mL	1000 µg/mL in AcCN 1 mL	10 µg/mL in Ethyl acetate for 10mL 10 mL	Internal Standard RAC-IS 1000 µg/mL in AcCN 1 x 1 mL 3,3',5,5'-Tetramethylbenzidine
o-Aminocazotoluene (01)	RAC-01	RAC-01-10X	RAC-01-EA-0.1X-10ML	Internal Standard RAC-IS-EA 1000 µg/mL in Ethyl acetate 1 x 1 mL 3,3',5,5'-Tetramethylbenzidine
4-Aminobiphenyl (02)	RAC-02	RAC-02-10X	RAC-02-EA-0.1X-10ML	
2-Amino-4-nitrotoluene (03)	RAC-03	RAC-03-10X	RAC-03-EA-0.1X-10ML	
Benzidine (04)	RAC-04	RAC-04-10X	RAC-04-EA-0.1X-10ML	
4-Chloroaniline (05)	RAC-05	RAC-05-10X	RAC-05-EA-0.1X-10ML	
4-Chloro-o-toluidine (06)	RAC-06	RAC-06-10X	RAC-06-EA-0.1X-10ML	
p-Cresidine (07)	RAC-07	RAC-07-10X	RAC-07-EA-0.1X-10ML	
2,4-Diaminoanisole* (08)	RAC-08	RAC-08-10X	RAC-08-EA-0.1X-10ML	
4,4'-Diaminodiphenylmethane (09)	RAC-09	RAC-09-10X	RAC-09-EA-0.1X-10ML	
2,4-Diaminotoluene (10)	RAC-10	RAC-10-10X	RAC-10-EA-0.1X-10ML	
3,3'-Dichlorobenzidine (11)	RAC-11	RAC-11-10X	RAC-11-EA-0.1X-10ML	
3,3'-Dimethoxybenzidine (12)	RAC-12	RAC-12-10X	RAC-12-EA-0.1X-10ML	
3,3'-Dimethylbenzidine (13)	RAC-13	RAC-13-10X	RAC-13-EA-0.1X-10ML	
3,3'-Dimethyl-4,4'-diaminodiphenylmethane (14)	RAC-14	RAC-14-10X	RAC-14-EA-0.1X-10ML	
4,4'-Methylenebis(2-chloroaniline) (15)	RAC-15	RAC-15-10X	RAC-15-EA-0.1X-10ML	
2-Naphthylamine (16)	RAC-16	RAC-16-10X	RAC-16-EA-0.1X-10ML	
4,4'-Oxydianilins (17)	RAC-17	RAC-17-10X	RAC-17-EA-0.1X-10ML	
4,4'-Thiodianiline (18)	RAC-18	RAC-18-10X	RAC-18-EA-0.1X-10ML	
o-Toluidine (19)	RAC-19	RAC-19-10X	RAC-19-EA-0.1X-10ML	
2,4,5-Trimethylaniline (20)	RAC-20	RAC-20-10X	RAC-20-EA-0.1X-10ML	
p-Aminocazobenzene (21)	RAC-21	RAC-21-10X	RAC-21-EA-0.1X-10ML	
2-Aminobiphenyl (22)	RAC-22	RAC-22-10X	RAC-22-EA-0.1X-10ML	
o-Anisidine (23)	RAC-23	RAC-23-10X	RAC-23-EA-0.1X-10ML	
3-Chloro-o-toluidine (24)	RAC-24	RAC-24-10X	RAC-24-EA-0.1X-10ML	
RAC-SET-R1 100 µg/mL	24 x 1 mL (Set includes the above ampules) in Acetonitrile * In form of the Sulfate hydrate 171 µg/mL in MeOH (100 µg/mL as the base)			Carcinogenic Aryl Amine Mix AE-00049 10 µg/mL in Ethyl acetate 1 x 1 mL AE-00049-10ML 10 µg/mL in Ethyl acetate 1 x 10 mL Mix contains the 24 Aryl Amines listed in the table to the left
RAC-SET-R1-10X 1000 µg/mL in AcCN	24 x 1 mL (Set includes the above ampules) in Acetonitrile * In form of the Sulfate hydrate 1,710 µg/mL in MeOH (1000 µg/mL as the base)			

Azodye Metabolites

Following new legislation azodye colours are no longer permitted for use in Germany if they produce one of the following metabolites often found due to a degradation of one or more azo-groups. All products listed are accompanied by a Certificate of Analysis for neat compounds, or a Gravimetric Certificate for standard solutions. Solvent "AL" is acetonitrile, "CY" is cyclohexane, "EA" is ethyl acetate, "IO" is iso-octane, "ME" is methanol.

Description	Cas NO.	Formula	Cat.No.	Conc.	Unit
2-Aminonaphthalene	91-59-8	C₁₀H₉N	L 20985200AL	10ng/ μ l	10ml
			L 20985200ME	10ng/ μ l	10ml
4-Aminobiphenyl	92-67-1	C ₁₂ H ₁₁ N	C 20983400	certified	10mg
			L 20983400CY	10ng/ μ l	10ml
			L 20983400ME	10ng/ μ l	10ml
			XA 20983400ME	100ng/ μ l	1ml
4-Amino-2',3-dimethylazobenzene	97-56-3	C₁₄H₁₅N₃	C 10202000	certified	0.25g
			L 10202000CY	10ng/ μ l	10ml
			XA 10202000CY	100ng/ μ l	1ml
2-Amino-3-nitrotoluene(2-Methyl-6-nitroaniline)	570-24-1	C ₇ H ₈ N ₂ O ₂	C 10207400	certified	0.25g
2-Amino-4-nitrotoluene(2-Methyl-5-nitroaniline)	99-55-8	C₇H₈N₂O₂	C 10207500	certified	0.25g
			L 10207500AL	10ng/ μ l	10ml
2-Amino-5-nitrotoluene(2-Methyl-4-nitroaniline)	99-52-5	C ₇ H ₈ N ₂ O ₂	C 10207600	certified	0.25g
			L 10207600AL	10ng/ μ l	10ml
2-Amino-6-nitrotoluene(2-Methyl-3-nitroaniline)	603-83-8	C₇H₈N₂O₂	C 10207700	certified	0.25g
			L 10207700AL	10ng/ μ l	10ml
3-Amino-2-nitrotoluene(3-Methyl-2-nitroaniline)	601-87-6	C ₇ H ₈ N ₂ O ₂	L 10207800AL	10ng/ μ l	10ml
3-Amino-4-nitrotoluene(5-Methyl-2-nitroaniline)	578-46-1	C₇H₈N₂O₂	C 10207900	certified	0.1g
			L 10207900AL	10ng/ μ l	10ml
4-Amino-2-nitrotoluene(4-Methyl-3-nitroaniline)	119-32-4	C ₇ H ₈ N ₂ O ₂	C 10208200	certified	0.25g
			L 10208200AL	10ng/ μ l	10ml
4-Amino-3-nitrotoluene(4-Methyl-2-nitroaniline)	89-62-3	C₇H₈N₂O₂	C 10208300	certified	0.25g
			L 10208300AL	10ng/ μ l	10ml
4-Aminophenylether(4,4'-Oxydianiline)	101-80-4	C ₁₂ H ₁₂ N ₂ O	C 10215000	certified	0.25g
			L 10215000AL	10ng/ μ l	10ml
			XA 10215000AL	100ng/ μ l	1ml
4-Aminophenylthioether(4,4'-Thiodianiline)	139-65-1	C₁₂H₁₀N₂S	L 10215500AL	10ng/ μ l	10ml
Aniline	62-53-3	C ₆ H ₇ N	C 10262500	certified	0.25g
			L 10262500CY	10ng/ μ l	10ml
			XA 10262500CY	100ng/ μ l	1ml
4,4'-Benzidine	92-87-5	C₁₂H₁₂N₂	C 10536000	certified	0.1g
			L 10536000AL	10ng/ μ l	10ml
			XA 10536000AL	100ng/ μ l	1ml
Bis-(4-aminophenyl)-methane(4,4'-Methylenedianiline)	101-77-9	C ₁₃ H ₁₄ N ₂	C 10648000	certified	0.25g
			L 10648000ME	10ng/ μ l	10ml
			XA 10648000ME	100ng/ μ l	1ml
Bis-(4-dimethylaminophenyl)methane	101-61-1	C₁₇H₂₂N₂	C 10651900	certified	0.25g
4-Chloroaniline	106-47-8	C ₆ H ₆ CLN	C 11352000	certified	0.5g
			L 11352000CY	10ng/ μ l	10ml
			XA 11352000AL	100ng/ μ l	1 ml
4-Chloro-2-methylaniline	95-69-2	C₇H₆CLN	C 11430000	certified	0.5g
			L 11430000CY	10ng/ μ l	10ml
			XA 11430000ME	100ng/ μ l	1 ml
4,4'-Diamino-3,3'-dimethyldiphenyl methane	838-88-0	C ₁₈ H ₁₈ N ₂	C 12194800	certified	0.1g
2,4-Diaminotoluene(4-Methyl-m-phenylenediamine)	95-80-7	C₇H₁₀N₂	C 12197600	certified	0.25g
			L 12197600AL	10ng/ μ l	10ml
3,3'-Dichlorobenzidine	91-94-1	C ₁₂ H ₈ CL ₂ N ₂	C 12377900	certified	10mg
			LA 12377900AL	10ng/ μ l	1ml
3,3'-Dimethoxybenzidine(o-Dianisidine)	119-90-4	C₁₄H₁₆N₂O₂	C 12721000	certified	0.1g
			XA 12721000AL	100ng/ μ l	1ml
3,3'-Dimethylbenzidine(o-Tolidine)	119-93-7	C ₁₄ H ₁₆ N ₂	C 12726000	certified	0.1g
2-Methoxy-5-methylaniline	120-71-8	C₈H₁₁NO	C 15081000	certified	0.25g
			L 15081000EA	10ng/ μ l	10ml
4-Methoxy-1,3-phenylene diamine		C ₇ H ₁₀ N ₂ O	C 15081900	certified	0.1g
			L 15081900AL	10ng/ μ l	10ml
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	C₁₃H₁₂CL₂N₂	C 15087500	certified	0.1g
			L 15087500AL	10ng/ μ l	10ml
			XA 15087500AL	100ng/ μ l	1ml
o-Tolidine(2-Methylaniline)	95-53-4	C ₇ H ₉ N	C 17594800	certified	0.25g
			L 17594800CY	10ng/ μ l	10ml
			XA 17594800CY	100ng/ μ l	1ml
2,4,5-Trimethylaniline	137-17-7	C₉H₁₃N	C 17878000	certified	10mg
			LA 17878000AL	10ng/ μ l	1ml

Azodyes-Mix 1

4-Aminobiphenyl
 4-Amino-2',3'-dimethylazobenzene(o-Aminoazotoluene)
 4-Aminophenylether(4,4'-Oxydianiline)
 4-Aminophenylthioether(4,4'-Thiodianiline)
 4,4'-Benzidine
 Bis-(4-aminophenyl)-methane(4,4'-Diaminodiphenylmethane)
 4-Chloroaniline(p-Chloroaniline)
 4-Chloro-2-methylaniline(4-Chloro-o-toluidine)
 2,4-Diaminotoluene(2,4-Toluyldiamine)
 3,3'-Dichlorobenzidine
 3,3'-Dimethoxybenzidine(o-Dianisidine)
 3,3'-Dimethylbenzidine(o-Tolidine)
 4,4'-Diamino-3,3'-dimethyldiphenyl methane
 2-Methoxy-5-methylaniline(p-Kresidine)
 4-Methoxy-1,3-phenylenediamine(2,4-Diaminoanisole)
 4,4'-Methylene-bis(2-chloroaniline)
 2-Methyl-5-nitroaniline(2-Amino-4-nitrotoluene)
 2-Naphthylamine
 0-Toluidine
 2,4,5-Trimethylaniline
(20 components)

Azodyes-Mix 6

4-Aminobiphenyl
 2-Aminonaphthalene
 4-Aminoazobenzene
 4-Amino-2',3'-dimethylazobenzene(o-Aminoazotoluene)
 2-Amino-4-nitrotoluene(2-Methyl-5-nitroaniline)
 4-Aminophenylether(4,4'-Oxydianiline)
 4-Aminophenylthioether(4,4'-Thiodianiline)
 2-Anisidine
 4,4'-Benzidine
 Bis-(4-aminophenyl)-methane(4,4'-Diaminodiphenylmethane)
 4-Chloroaniline(p-Chloroaniline)
 4-Chloro-2-methylaniline(4-Chloro-o-toluidine)
 4,4'-Diamino-3,3'-dimethyldiphenyl methane
 2,4-Diaminotoluene(2,4-Toluyldiamine)
 3,3'-Dichlorobenzidine
 3,3'-Dimethoxybenzidine(o-Dianisidine)
 2,4-Dimethylaniline
 2,6-Dimethylaniline
 3,3'-Dimethylbenzidine(o-Tolidine)
 2-Methoxy-5-methylaniline(p-Kresidine)
 4-Methoxy-1,3-phenylenediamine(2,4-Diaminoanisole)
 4,4'-Methylene-bis(2-chloroaniline)
 0-Toluidine
 2,4,5-Trimethylaniline
(24 components)

Azodyes-Mix 3

4-Aminobiphenyl
 4-Amino-2',3'-dimethylazobenzene(o-Aminoazotoluene)
 4-Aminophenylether(4,4'-Oxydianiline)
 4-Aminophenylthioether(4,4'-Thiodianiline)
 2-Anisidine
 4,4'-Benzidine
 Bis-(4-aminophenyl)-methane(4,4'-Diaminodiphenylmethane)
 4-Chloroaniline(p-Chloroaniline)
 4-Chloro-2-methylaniline(4-Chloro-o-toluidine)
 2,4-Diaminotoluene(2,4-Toluyldiamine)
 3,3'-Dichlorobenzidine
 3,3'-Dimethoxybenzidine(o-Dianisidine)
 3,3'-Dimethylbenzidine(o-Tolidine)
 4,4'-Diamino-3,3'-dimethyldiphenyl methane
 2-Methoxy-5-methylaniline(p-Kresidine)
 4-Methoxy-1,3-phenylenediamine(2,4-Diaminoanisole)
 4,4'-Methylene-bis(2-chloroaniline)
 2-Methyl-5-nitroaniline(2-Amino-4-nitrotoluene)
 2-Naphthylamine
 0-Toluidine
 2,4,5-Trimethylaniline
(21 components)

Azodyes-Mix 9

4-Aminobiphenyl
 2-Aminonaphthalene
 4-Amino-2',3'-dimethylazobenzene(o-Aminoazotoluene)
 2-Amino-4-nitrotoluene(2-Methyl-5-nitroaniline)
 4-Aminophenylether(4,4'-Oxydianiline)
 4-Aminophenylthioether(4,4'-Thiodianiline)
 2-Anisidine
 4,4'-Benzidine
 Bis-(4-aminophenyl)-methane(4,4'-Diaminodiphenylmethane)
 4-Chloroaniline(p-Chloroaniline)
 4-Chloro-2-methylaniline(4-Chloro-o-toluidine)
 4,4'-Diamino-3,3'-dimethyldiphenyl methane
 2,4-Diaminotoluene(2,4-Toluyldiamine)
 3,3'-Dichlorobenzidine
 3,3'-Dimethoxybenzidine(o-Dianisidine)
 2,4-Dimethylaniline
 2,6-Dimethylaniline
 3,3'-Dimethylbenzidine(o-Tolidine)
 2-Methoxy-5-methylaniline(p-Kresidine)
 4-Methoxy-1,3-phenylenediamine(2,4-Diaminoanisole)
 4,4'-Methylene-bis(2-chloroaniline)
 0-Toluidine
 2,4,5-Trimethylaniline
(23 components)