



CTL® GmbH
CHEMICAL TECHNOLOGICAL LABORATORY

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[Order date]

—

[Date received]

—

[Service date]

03.12.2018

tattoo1ab.eu

Certificate

[Article] Permanent cosmetic pigment
[Brand] Perma Blend
[Colour/product code] Espresso / PBES
[Test] Aromatic amines and carcinogens acc. to CoE Resolution ResAP(2008)1: Part 1a, Part 1b

Part 1a
Testing of aromatic amines with carcinogenic, mutagenic, reproductive and sensitising properties according to CoE Resolution ResAP(2008)1
Detection limit: 1 ppm; limit: as low as technically avoidable

DIN EN 14362, § 64 LFGB 82.02-2,3,4,9
GC/MS analysis
HPLC analysis

| Amount (ppm) | Amine | EC no | CAS no | Amount (ppm) | Amine | EC no | CAS no |
|-----------------|------------------------------|-----------|----------|-----------------|-------------------------------------|-----------|-------------|
| — | Biphenyl-4-ylamine | 202-177-1 | 92-87-1 | — | 3,3'-Dimethoxybenzidine | 204-385-4 | 119-90-4 |
| — | Benzidine | 202-199-1 | 92-87-5 | — | 3,3'-Dimethylbenzidine | 204-368-0 | 119-93-7 |
| — | 4-Chloro-o-toluidine | 202-411-6 | 95-59-2 | — | 4,4'-Methylenedi-o-toluidine | 212-658-8 | 838-88-0 |
| — | 2-Naphthylamine | 202-080-4 | 91-59-8 | — | 6-Methoxy-m-toluidine | 204-419-1 | 120-71-8 |
| — | o-Aminoazotoluene | 202-591-2 | 97-56-3 | — | 4,4'-Methylenebis-(2-chloroaniline) | 202-918-9 | 101-14-4 |
| — | 5-Nitro-o-toluidine | 202-765-8 | 99-55-8 | — | 4-Methyl-m-phenylenediamine | 202-453-1 | 95-80-7 |
| — | 4-Chloroaniline | 203-401-0 | 106-47-8 | — | o-Anisidine | 201-963-1 | 90-04-0 |
| — | 4-Methoxy-m-phenylenediamine | 210-406-1 | 615-05-4 | — | 4-Aminoazobenzene | 200-453-6 | 60-09-3 |
| — | 4,4'-Methylenedianiline | 202-974-4 | 101-77-9 | — | 6-Amino-2-ethoxynaphthalene | — | 283733-21-8 |
| — | 3,3'-Dichlorobenzidine | 202-109-0 | 91-94-1 | — | 4-Amino-3-fluorophenol | 418-230-9 | 389-95-1 |

Part 1b
Testing of carcinogens classified in categories 1, 2 and 3 by the European Commission and mentioned in the Council Directive 1967/548/EEC of 27 June 1967 according to CoE Resolution ResAP(2008)1
Detection limit: 1 ppm

DIN EN 14362, § 64 LFGB 82.02-2,3,4,9
GC/MS analysis
HPLC analysis

| Amount (ppm) | Amine | EC no | CAS no | Amount (ppm) | Amine | EC no | CAS no |
|-----------------|------------------------|-----------|----------|-----------------|-----------------------|------------|----------|
| — | 4,4'-Oxydianiline | 202-977-0 | 101-80-4 | — | Para-phenylenediamine | 2003-404-7 | 106-50-3 |
| — | 4,4'-Thiodianiline | 205-370-9 | 139-65-1 | — | 2,4-Xyldine | — | 95-66-1 |
| — | o-Toluidine | 202-429-0 | 95-53-4 | — | 2,6-Xyldine | — | 87-62-7 |
| — | 2,4,5-Trimethylaniline | 205-282-0 | 137-17-7 | | | | |

BIELEFELD, 03. DECEMBER 2018

Helmut Meyer (Lab manager)

(Part 1 below detection limit)

[Sig] The detected results are only valid for the tested sample. Withdrawal within consent no single part of the report is allowed to be forwarded to third parties.

The validity of this certificate is 7 years.

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[Article] Permanent cosmetic pigment

[Brand] Perma Blend

[Colour/product code] Espresso / PBES

[Test] Dyestuffs acc. to CoE Resolution ResAP(2008)1: Part 2

Part 2
Testing of dyestuffs according to CoE Resolution ResAP(2008)1
Detection limit: 5 mg/l

DIN 54231 in the up-to-date legislation
GC/MS analysis
HPLC analysis
TLC analysis

| Amount (ppm) | Colourant | CI no | CAS no | Amount (ppm) | Colourant | CI no | CAS no |
|-----------------|-------------------|-------|------------|-----------------|--------------------|---------|------------|
| -- | Acid Green 16 | 44025 | 12768-78-4 | -- | Disperse Orange 37 | | 12223-33-5 |
| -- | Acid Red 26 | 16150 | 3761-53-3 | -- | Disperse Red 1 | 11110 | 2872-52-8 |
| -- | Acid Violet 17 | 42650 | 4129-84-4 | -- | Disperse Red 17 | 11210 | 3179-89-3 |
| -- | Acid Violet 49 | 42640 | 1694-09-3 | -- | Disperse Yellow 3 | 11855 | 2832-40-8 |
| -- | Acid Yellow 36 | 13065 | 587-98-4 | -- | Disperse Yellow 9 | 10375 | 6373-73-5 |
| -- | Basic Blue 7 | 42595 | 2390-60-5 | -- | Pigment Orange 5 | 12075 | 3468-63-1 |
| -- | Basic Green 1 | 42040 | 633-03-4 | -- | Pigment Red 53 | 15585 | 2092-56-0 |
| -- | Basic Red 1 | 45160 | 989-38-8 | -- | Pigment Violet 3 | 42535:2 | 1325-82-2 |
| -- | Basic Red 9 | 42500 | 569-61-9 | -- | Pigment Violet 39 | 42555:2 | 64070-98-0 |
| -- | Basic Violet 1 | 42535 | 8004-87-3 | -- | Solvent Blue 35 | 61554 | 17354-14-2 |
| -- | Basic Violet 10 | 45170 | 81-88-9 | -- | Solvent Orange 7 | 12140 | 3118-97-6 |
| -- | Basic Violet 3 | 42555 | 548-62-9 | -- | Solvent Red 24 | 26105 | 85-83-6 |
| -- | Disperse Blue 1 | 64500 | 2475-45-8 | -- | Solvent Red 49 | 45170:1 | 509-34-2 |
| -- | Disperse Blue 106 | | 12223-01-7 | -- | Solvent Violet 9 | 42555:1 | 467-63-0 |
| -- | Disperse Blue 124 | | 61951-51-7 | -- | Solvent Yellow 1 | 11000 | 60-09-3 |
| -- | Disperse Blue 3 | 61505 | 2475-46-9 | -- | Solvent Yellow 2 | 11020 | 60-11-7 |
| -- | Disperse Blue 35 | | 12222-75-2 | -- | Solvent Yellow 3 | 11160 | 97-56-3 |
| -- | Disperse Orange 3 | 11005 | 730-40-5 | | | | |

BIELEFELD, 03. DECEMBER 2018

Helmuth Meyer (lab manager)

(--)= Below detection limit

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Permanent cosmetic pigment

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Perma Blend

[Colour/product code]

Espresso / PBES

[Test]

Heavy Metals acc. to CoE Resolution ResAP(2008)1: Part 3

Part 3
Testing of heavy metals according to CoE Resolution
ResAP(2008)1

Method: Prior, G. (2014). Tattoo Inks: Analysis, Pigments,
Legislation.
Berlin: epubli. CTL method 2, p. 83.

| Amount (ppm) | Elements or compound | Limit (ppm) | Detection limit (ppm) | Amount (ppm) | Elements or compound | Limit (ppm) | Detection limit (ppm) |
|-----------------|-------------------------|----------------|--------------------------|-----------------|-------------------------|-------------------------------------|--------------------------|
| < 1 | Arsenic (As) | ≤ 2 | 1 | < 0.1 | Nickel (Ni) | As low as technically achievable | 0.1 |
| < 5 | Barium (Ba) | ≤ 50 | 5 | < 1 | Lead (Pb) | ≤ 2 | 1 |
| < 0.1 | Cadmium (Cd) | ≤ 0.2 | 0.1 | < 1 | Selenium (Se) | ≤ 2 | 1 |
| < 5 | Cobalt (Co) | ≤ 25 | 5 | < 1 | Antimony (Sb) | ≤ 2 | 1 |
| < 0.1 | Chromium (Cr), VI | ≤ 0.2 | 0.1 | < 5 | Tin (Sn) | ≤ 50 | 5 |
| < 5 | Copper (Cu), soluble | ≤ 25 | 5 | < 5 | Zinc (Zn) | ≤ 50 | 5 |
| < 0.1 | Mercury (Hg) | ≤ 0.2 | 0.1 | | | | |

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[Colour/product code]

Espresso / PBES

[Test]

Sterility acc. to CoE Resolution ResAP(2008)1; ASU §64 LFGB L59.00-4; L06.00-18: Part 5
tested on a single representative sample

Part 5
Testing of sterility
Detection limit: 1.0×10^1 CFU/g

Results

Microbiological test:
pseudomonads = King A, King B,
Oxidase test acc. to CoE
ResAP(2008)1

< 1.0×10^1 CFU/g


Anaerobes sulfite-reducing
sporulating bacteria acc. to ASU
§64 LFGB L59.00-4

< 1.0×10^1 CFU/g

Aerobes mesophilic sporulating
bacteria acc. to ASU §64 LFGB
L06.00-18

< 1.0×10^1 CFU/g

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[Test]

PAH and BaP acc. to CoE Resolution ResAP(2008)1: Part 4

Part 4

Testing of Polycyclic Aromatic Hydrocarbons (PAH) and Benzo-a-Pyrene (BaP)

according to CoE Resolution ResAP(2008)1

Detection limit: PAH: 0.05 ppm as total; Benzo-a-pyrene: 0.5 ppb

Limit: PAH: 0.5 ppm as total; Benzo-a-pyrene: 5 ppb

EPA, ZEK 2008-01

| Amount (ppm) | Elements or compound | Amount (ppm) | Elements or compound |
|-----------------|----------------------|-----------------|------------------------|
| --- | Naphthalene | --- | Benz(a)anthracene |
| --- | Acenaphthylene | --- | Chrysene |
| --- | Acenaphthene | --- | Benzo(b)fluoranthene |
| --- | Fluorene | --- | Benzo(k)fluoranthene |
| --- | Phenanthrene | --- | Dibenzo(a,h)anthracene |
| --- | Anthracene | --- | Indo (1,2,3-cd)pyrene |
| --- | Fluoranthene | --- | Benzo(g,h,i)perylene |
| --- | Pyrene | --- | Benzo-a-pyrene (BaP) |

Result as total: all below detection limit

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Helmut Meyer (lab manager)

(---) = below detection limit

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