
Technical Information

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Sicovit®

- Colorants for foods, drugs, and cosmetics

Sicomet®

- Colorants for cosmetics only

® = Registered trademark
of BASF Aktiengesellschaft

cosmetic
SOLUTIONS

- Hair Care
- Skin Care
- Oral Care

 **BASF**
The Chemical Company

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General

The Sicovit®/Sicomet® product line embraces dyes in powder form (watersoluble), and pigments (insoluble) for use in foods, drugs, and cosmetics. The colorants designated Sicovit® are authorized for foods, drugs, and cosmetics within the European Union. The Sicomet® colorants are authorized solely for cosmetics and not for foods or drugs.

Nomenclature

The nomenclature distinguishes between food dyes, iron oxides, and colorants that do not belong to either of these two groups.

- 1 The nomenclature for **dyes for coloring foods** consists of the tradename **Sicovit®** followed by the trivial name and the E number. The E number for the food dyes is preceded by a two-digit numeral, which indicates the percentage of the pure dye.

Example

Sicovit® Yellow Orange 85 E 110

- 2 **Iron oxides** are designated by the tradename **Sicovit**, the shade, a two-digit numeral, and the E-number E 172.

Example

Sicovit® Yellow 10 E 172

- 3 The nomenclature of the **Sicomet®** colorants consists of
 - the Sicomet® trademark
 - the shade
 - a symbol that indicates the physical properties
 - the five-digit CI number

The symbols have the following significance:

P - Pigment

S - Anionic dye soluble in water.

Examples

Sicomet® Uranin S 45350 = acid dye with CI No. 45350

Sicomet® Blue P 74160 = pigment with CI No. 74160

Product Lines (arranged in sequence of Colour Index numbers)

Colour Index	Product	INCI (CTFA) nomenclature
11680	Sicomet® Yellow P 11680	C. I. 11680, Pigment Yellow 1
14720	Sicovit® Azorubine 85 E 122	C. I. 14720, Acid Red 14
15985	Sicovit® Yellow Orange 85 E 110	C. I. 15985, Sunset Yellow
16185	Sicovit® Amaranth 85 E 123	C. I. 16185, Acid Red 27
16255	Sicovit® Cochineal Red 80 E 124	C. I. 16255, Acid Red 18
19140	Sicovit® Tartrazine 85 E 102	C. I. 19140, Acid Yellow 23
42051	Sicovit® Patent Blue 85 E 131	C. I. 42051, Acid Blue 3
42090	FD&C Blue No. 1	C. I. 42090, FD&C Blue No. 1
45350	Sicomet® Uranin S 45350	C. I. 45350, Acid Yellow 73 Sodium Salt
45430	Sicovit® Erythrosine 88 E 127	C. I. 45430, Acid Red 51
47005	Sicovit® Quinoline Yellow 70 E 104	C. I. 47005, Acid Yellow 3
47005	D&C Yellow No. 10	C. I. 47005, D&C Yellow No. 10
73015	Sicovit® Indigotine 85 E 132	C. I. 73015, Acid Blue 74
74160	Sicomet® Blue P 74160	C. I. 74160, Pigment Blue 15
74260	Sicomet® Green P 74260	C. I. 74260, Pigment Green 7
77007	Sicomet® Blue P 77007	C. I. 77007, Ultramarines
77491	Sicovit® Red 30 E 172	C. I. 77491, Iron Oxides
77492	Sicovit® Yellow 10 E 172	C. I. 77492, Iron Oxides
77499	Sicovit® Black 80 E 172	C. I. 77499, Iron Oxides
77499	Sicovit® Black 85 E 172	C. I. 77499, Iron Oxides
77510	Sicomet® Blue P 77510	C. I. 77510, Ferric Ferrocyanide
Colorant mixtures		
	77491 + 77492 + 77499	Sicovit® Brown 70 E 172 Iron Oxides
	77491 + 77499	Sicovit® Brown 75 E 172 Iron Oxides

Pertinent legislation

Use in foods

In the **EU**, the purity of food dyes is regulated by the directive 95/45/EC [2]. The Sicovit® colorants conform to this directive.

In the ordinance for reorganization of food regulations on additives, the directive 95/45/EC has been adopted in German legislation [3].

In the **USA**, the list of authorized colorants is not the same as in the European Union. Consequently, there are only a few products that are authorized in both the USA and the EU (cf. Tables 1.1-1.2).

Use in drugs

In the **EU**, the use of colorants in drugs is regulated by an EC directive published in 1977 [4]. This document refers to the purity criteria laid down in the EC directive mentioned above for the coloration of foods [1].

In **Germany**, the 1977 EC directive has been adopted in the form of an ordinance on colorants for drugs in German legislation [4].

The only European pharmacopoeia that contains monographs for colorants is the **Pharmacopée Française**. When these monographs were drawn up, no effort was made to harmonize them with the legislation existing in the EC. Consequently, the monographs differ in many points from the purity criteria laid down in the relevant EC directive of 1995 [2].

In the **USA**, the use of colorants in drugs is laid down in the Code of Federal Regulations [6].

For iron oxides, a monograph is contained in the current USP/NF, but the purity specifications that it contains unfortunately do not agree with those in CFR. Sicovit® Yellow 10 E 172 and Red 30 E 172 conform to both regulations (cf. Table 1.2).

Use in cosmetics

In the EU, the authorization of colorants for cosmetics is regulated by EC directive for cosmetics, which was published in 1976 [7]. This directive was adopted in German legislation in the form of the Cosmetics Ordinance [8] in 1985. The Sicomet® and Sicovit® colorants conform to both regulations (cf. Tables 1.1-1.3).

The legislature distinguishes between four fields of application:

- 1st field of application:** Colorants for all applications:
- 2nd field of application:** Colorants for all applications except for the area of the eyes:
- 3rd field of application:** Colorants for products that may not be used in applications that involve contact with the mucous membranes.
- 4th field of application:** Colorants for products that come into contact with the skin for only short periods.

Regulations on the quality of colorants (Sicovit® and Sicomet®)**Table 1.1 Sicovit® dyes**

	Tartrazine 85 E 102	Quinoline Yellow 70 E 104	D&C Yellow No. 10	Yellow Orange 85 E 110	Azorubine 85 E 122	Amaranth 85 E 123
Colour Index Number	19140	47005	47005	15985	14720	16185
CAS Number	1934-21-0	95193-83-2	8004-92-0	2783-94-0	3567-69-9	915-67-3
E-Number	102	104	—	110	122	123
EC-directive on food colorants [2]*	+	+	n.a.	+	+	+
EC-directive on colorants for drugs [4]*	+	+	n.a.	+	+	+
German ordinance on food additives [5]*	+	+	n.a.	+	+	+
FAO FNP 31/1	+	+	—	+	+	+
Code of Federal Regulations [6]	n.a.	n.a.	+	n.a.	n.a.	n.a.
USP/NF*	Does not contain monographs for water-soluble dyes					
German ordinance on cosmetics (KVO) [8]	+	+	—	+	+	+
Scope of KVO	1	1	1	1	1	1

* Current version
n. t. = not tested
n. a. = not authorized

+ = corresponds
— = does not correspond

Table 1.1 Sicovit® dyes

	Cochineal Red 80 E 124	Erythrosine 88 E 127	Patent Blue 85 E 131	Indigotine 85 E 132	FD&C Blue No. 1
Colour Index Number	16255	45430	42051	73015	42090
CAS Number	2611-82-7	16423-68-0	3536-49-0	860-22-0	3844-45-9
E-Number	124	127	131	132	+
EC directive on food colorants [2]	+	+	+	+	n.t.
EC directive on colorants for drugs [4]	+	+	+	+	n.t.
German ordinance on food additives [5]	+	+	+	+	n.t.
FAO FNP 31/1	+	+	+	+	n.t.
Code of Federal Regulations [6]	n.a.	n.a.	n.a.	n.a.	+
USP/NF*	Does not contain monographs for water-soluble dyes				
German ordinance on cosmetics (KVO) [8]	+	+	+	+	+
Scope of KVO	1	1	1	1	1

* Current version
n. t. = not tested
n. a. = not authorized

+ = corresponds
— = does not correspond

Table 1.2 Sicovit® iron oxides

	Iron oxide Yellow 10 E 172	Iron oxide Red 30 E 172	Iron oxide Brown 70 E 172	Iron oxide Brown 75 E 172	Iron oxide Black 80 E 172	Iron oxide Black 85 E 172
Colour Index Number	77492	77491	77491 +77492 +77499	77491 +77499	77499	77499
CAS Number	51274-00-1	1309-37-1	1309-37-1 +51274-00-1 +12227-89-3	1309-37-1 +12227-89-3	12227-89-3	12227-89-3
E-Number	172	172	172	172	172	172
EC directive on food colorants [2]	+	+	+	+	+	+
EC directive on colorants for drugs [4]	+	+	+	+	+	+
German ordinance on food additives [5]	+	+	+	+	+	+
FAO FNP 31/1 (USA)	+	+	+	-	-	-
Code of Federal Regulations [6]	+	+	+	+	+	+
USP/NF*	+	+	n. t.	n. t.	-	-
German ordinance on cosmetics (KVO) [8]	+	+	+	+	+	+
Scope of KVO	1	1	1	1	1	1

* Current version
n. t. = not tested

+ = corresponds
- = does not correspond

Table 1.3 Sicomet® colorants

	Yellow P 11680	Uranin S 45350	Blue P 74160	Green P 74260	Blue P 77007	Blue P 77510
Colour Index Number	11680	45350	74160	74260	77007	77510
CAS Number	2512-29-0	518-47-8	147-14-8	1328-53-6	57455-37-5	14038-43-8
Dye (D)/Pigment (P)	P	D	P	P	P	P
EC directive on cosmetics [7]	+	+	+	+	+	+
German ordinance on cosmetics [8]	+	+	+	+	+	+
Scope of KVO	3	1	1	2	1	1
Code of Federal Regulations [6]	n. a.	n. t.	n. a.	n. a.	+	+

n. t. = not tested
n. a. = not authorized

+ = corresponds

Specifications

Specifications for Sicovit® dyes and pigments are listed in Tables 2.1 and 2.2.

For reasons connected with our production and for standardization reasons, the colorants still contain sodium sulfate and/or sodium chloride and residual moisture.

Specifications for Sicomet® dye and pigments are listed in Tables 2.3.

Microbial status for Sicovit® / Sicomet® colorants when released:

Total aerobic bacteria count	1,000 CFU/g max.
Yeasts / Mould fungi	100 CFU/g max.
Enterobacteria	neg/g
Escherichia Coli	neg/g
Staphylococcus aureus	neg/g
Pseudomonas aeruginosa	neg/g
Salmonella	neg/10 g

The method adopted for denomination is the current European Pharmacopoeia (Ph. Eur).

Exact descriptions of all the other test methods are given in our Technical Information entitled „Analytical tests for the Sicovit® and Sicomet® colorants“.

Table 2.1 Specifications for Sicovit® dyes

	Tartrazine 85 E 102	Quinoline Yellow 70 E 104	Yellow Orange 85 E 110	Azorubine 85 E 122	Amaranth 85 E 123	Cochineal Red 80 E 124	Erythrosine 88 E 127	Patent Blue 85 E 131	Indigotine 85 E 132	D&C Yellow No. 10	FD&C Blue No. 1
Pure dye content (%)	≥ 85	≥ 70	≥ 85	≥ 85	≥ 85	≥ 80	≥ 87	≥ 85	≥ 85	≥ 85	≥ 85
Subsidiary coloring matters (%)	≤ 1	≤ 4	≤ 5	≤ 2	≤ 3	≤ 1	≤ 4	≤ 2	≤ 1		≤ 6
Ether extractable matter (%)	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2		
Water insoluble matter (%)	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2
Synthetic intermediates (%)	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.4	≤ 0.5	≤ 0.5		
Unsulf., primary amines (mg/kg)	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100	≤ 100		≤ 100	≤ 100		
As (mg/kg)	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3
Pb (mg/kg)	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 20	≤ 10
Hg (mg/kg)	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	
Cd (mg/kg)	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1		
Inorganic iodine compounds (%)							≤ 0.1				
Heavy metals (mg/kg)	≤ 40	≤ 40	≤ 40	≤ 40*	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40

* EC 95/45 English version

Table 2.2 Specifications for Sicovit® pigments (iron oxides)

		Iron oxide Yellow 10 E 172	Iron oxide Red 30 E 172	Iron oxide Brown 70 E 172	Iron oxide Brown 75 E 172	Iron oxide Black 80 E 172	Iron oxide Black 85 E 172
Fe	%	≥ 60	≥ 68	≥ 60	≥ 60	≥ 68	≥ 68
Assay (USP/NF)	%	97–100.5	97–100.5	–	–	–	–
As	mg/kg	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Pb	mg/kg	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Hg	mg/kg	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Cd	mg/kg	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
Cu	mg/kg	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30
Ba	mg/kg	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30
Cr	mg/kg	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30
Zn	mg/kg	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
Ni	mg/kg	≤ 50	≤ 50	≤ 100	≤ 150	≤ 200	≤ 200
Water solubles (USP/NF; EC)	%	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
Acid insolubles (USP/NF)	%	≤ 0.1	≤ 0.1	–	–	–	–

Table 2.3 Specifications for Sicomet® colorants

	Arsenic	Lead
Yellow P 11680	≤ 5 ppm	≤ 20 ppm
Uranin S 45350	≤ 5 ppm	≤ 20 ppm
Blue P 74160	≤ 5 ppm	≤ 20 ppm
Green P 74260	≤ 5 ppm	≤ 20 ppm
Blue P 77007	≤ 5 ppm	≤ 20 ppm
Blue P 77510	≤ 5 ppm	≤ 20 ppm

Physical and chemical properties

Solubility

The solubility of the various dyes is given in Table 3. Iron oxides are pigments, i.e. insoluble.

The solubility is determined in the filtrate of a solution with maximum saturation.

Table 3: Solubility of the dyes (approximate figures in g/l)

	Water dem. (ph 6)	Ethanol abs.	Propylene glycol
Sicomet® Uranin S 45350	8*	30	50
Sicovit® Quinoline Yellow 70 E 104	130	<0.1	30
D&C Yellow No. 10	20	<0.1	30
Sicovit® Tartrazine 85 E 102	160	<0.1	30
Sicovit® Yellow Orange 85 E 110	90	<0.1	50
Sicovit® Cochineal Red 80 E 124	260	<0.1	60
Sicovit® Erythrosine 88 E 127	60	50	50
Sicovit® Azorubine 85 E 122	50	<0.1	<0.1
Sicovit® Amaranth 85 E 123	80	<0.1	<0.1
Sicovit® Indigotine 85 E 132	10	<0.1	15
Sicovit® Patent Blue 85 E 131	8	10	15
FD&C Blue No. 1	260	15	350

* at pH 8 : 800 g/l

pH stability

The pH of 1% solutions or dispersions of the colorants in water was set to various values. The stability was evaluated after a period of one hour or one week, respectively, by comparison with the 1% solution/dispersion without pH adjustment (cf. Tables 4.1 and 4.2).

Table 4.1 pH stability of the dyes

	pH 3 (hydrochloric acid)		pH 3 (citric acid)		pH 6		pH 8 (NaOH)		pH 10 (NaOH)	
	1 h	7 d	1 h	7 d	1 h	7 d	1 h	7 d	1 h	7 d
Sicomet® Uranin S 45350	↓	↓	↓	↓	-	↓	-	-	-	-
Sicovit® Quinoline Yellow 70 E 104	+	-	-	-	-	-	-	-	+	+
D&C Yellow No. 10	+	-	-	-	-	-	-	-	+	+
Sicovit® Tartrazine 85 E 102	-	-	-	-	-	-	-	-	+	+
Sicovit® Yellow Orange 85 E 110	-	-	-	-	-	-	-	-	+	+
Sicovit® Cochineal Red 80 E 124	-	-	-	-	-	-	-	-	+	+
Sicovit® Erythrosine 88 E 127	↓	↓	↓	↓	-	-	-	-	-	-
Sicovit® Azorubine 85 E 122	-	-	-	-	-	-	-	-	-	-
Sicovit® Amaranth 85 E 123	-	-	-	-	-	-	-	-	-	-
Sicovit® Indigotine 85 E 132	-	-	-	-	-	-	-	-	-	-
Sicovit® Patent Blue 85 E 131	Green	Green	Green	Green	-	-	-	-	-	-
FD&C Blue No. 1	-	-	-	-	-	-	-	-	-	-

- No Change
↓ Precipitate
+ Higher color strength

Table 4.2 pH stability of the pigments

	pH 3 (hydrochloric acid)		pH 3 (citric acid)		pH 6		pH 8 (NaOH)		pH 10 (NaOH)	
	1 h	7 d	1 h	7 d	1 h	7 d	1 h	7 d	1 h	7 d
Sicovit® Yellow 10 E 172	–	–	–	–	–	–	–	–	–	–
Sicovit® Red 30 E 172	–	–	–	–	–	–	–	–	–	–
Sicovit® Brown 70 E 172	–	–	–	–	–	–	–	–	–	–
Sicovit® Brown 75 E 172	–	–	–	–	–	–	–	–	–	–
Sicovit® Black 80 E 172	–	–	–	–	–	–	–	–	–	–
Sicovit® Black 85 E 172	–	–	–	–	–	–	–	–	–	–
Sicomet® Yellow P 11680	–	–	–	–	–	–	–	–	–	–
Sicomet® Blue P 77007	Some H ₂ S- formed	–	Decol- orized (H ₂ S)	Decol- orized	–	–	–	–	–	–
Sicomet® Blue P 74160	–	–	–	–	–	–	–	–	–	–
Sicomet® Blue P 77510	–	–	–	↑	–	↑	–	↑	–	Green↑
Sicomet® Green P 74260	–	–	–	–	–	–	–	–	–	–

– No change
↓ Precipitate
↑ Partially dissolved

Stability to light

Dyes (cf. Table 5.1)

An aqueous 0.001% solution of the dye was exposed to a xenon lamp (Suntest apparatus). The dye concentration was determined photometrically, and the stability to light was evaluated on the following scale:

5: up to 5% loss in color strength
4: up to 10% loss in color strength
3: up to 20% loss in color strength
2: up to 30% loss in color strength
1: > 30% loss in color strength

Table 5.1 Stability of the dyes to heat and light

	pH 6				pH 8			Stability to heat (°C)	
	2 h	6 h	10 h	20 h	2 h	6 h	10 h		
Sicomet® Uranin S 45350	Decolorization		3	2	Brown coloration			150	
Sicovit® Quinoline Yellow 70 E 104	5	4	3	2	5	4	3	2	150
D&C Yellow No. 10	5	4	3	2	5	4	3	2	150
Sicovit® Tartrazine 85 E 102	5	5	5	5	5	5	5	4	150
Sicovit® Yellow Orange 85 E 110	5	5	5	5	5	5	5	5	150
Sicovit® Cochineal Red 80 E 124	5	4	3	1	5	4	3	2	120
Sicovit® Erythrosine 88 E 127	Decolorization				Decolorization		150		
Sicovit® Azorubine 85 E 122	5	4	3	3	4	2	1	1	120
Sicovit® Amarant 85 E 123	5	4	3	2	5	4	4	3	120
Sicovit® Indigotine 85 E 132	5	3	3	1	4	3	1	1	120
Sicovit® Patent Blue 85 E 131	5	5	5	4	5	5	5	5	120
FD&C Blue No. 1	5	5	4	3	5	5	5	5	120

Stability to heat

The data in Tables 5.1 and 5.2 apply to the products in the powder form after they have been kept for four hours at the temperature cited.

Table 5.2 Stability of the pigments to light and heat

	1 h	5 h	10 h	Stability to heat (°C)
Sicovit® Yellow 10 E 172	5	5	5	150
Sicovit® Red 30 E 172	5	5	5	400
Sicovit® Brown 70 E 172	5	5	5	150
Sicovit® Brown 75 E 172	5	5	5	150
Sicovit® Black 80 E 172	5	5	5	150
Sicovit® Black 85 E 172	5	5	5	150
Sicomet® Yellow P 11680	5	5	5	120
Sicomet® Blue P 77007	4 – 5	4 – 5	4 – 5	200
Sicomet® Blue P 74160	4 – 5	4 – 5	4 – 5	200
Sicomet® Blue P 77510	4 – 5	4 – 5	4 – 5	150
Sicomet® Green P 74260	4 – 5	4 – 5	4 – 5	150

Pigments (cf. Table 5.2)

The pigments were dispersed in a lacquer, which was drawn down onto paper board. After the drawdown had dried, it was exposed to a xenon lamp (Suntest instrument). After exposure periods of 1, 5, and 10 hours, the stability was evaluated by comparison against unexposed specimens.

The comparison was made on the five-grade grey scale (DIN 54001).

In the cosmetics field, the light stability of dyes can often be improved by adding ultraviolet absorbers, but there are no true general rules that apply to the nature and the amount of the UV absorber to be added. As Figs. 1 – 5 show, UV absorbers exert different effects on different dyes, even in the same basic formulation (in each case, a shampoo containing 0.01% of dye and 0.1% of Uvinul®).

Fig. 1 Sicovit® Tartrazine 85 E 102

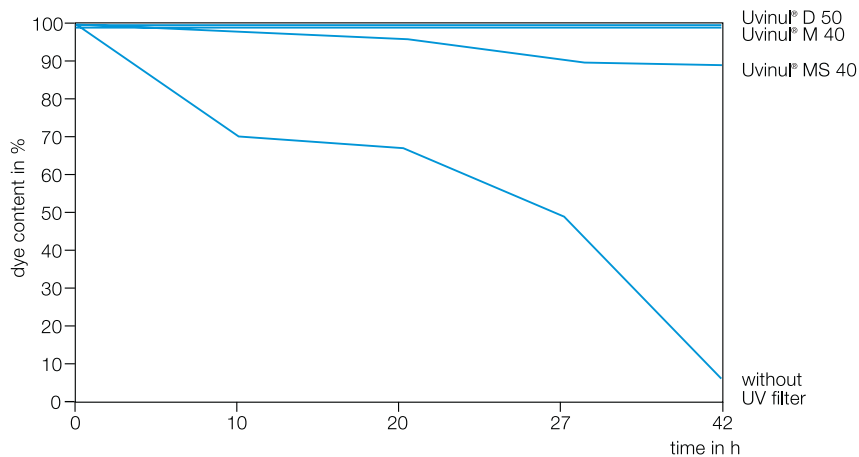


Fig. 2 Sicovit® Yellow Orange 85 E 110

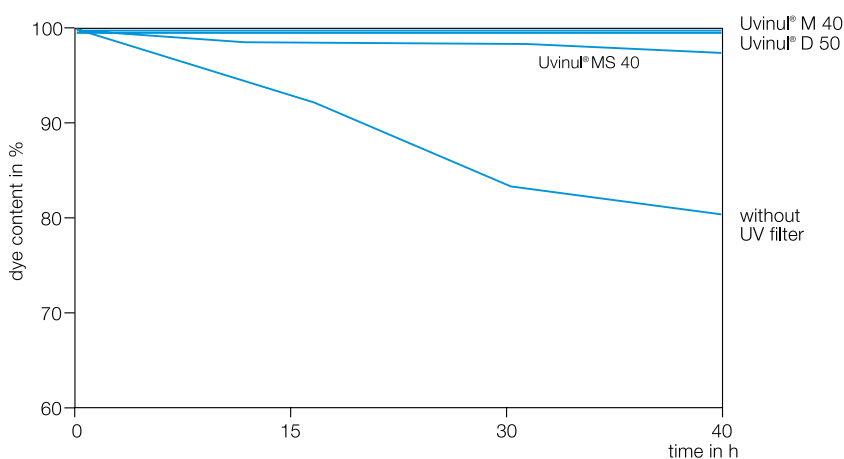
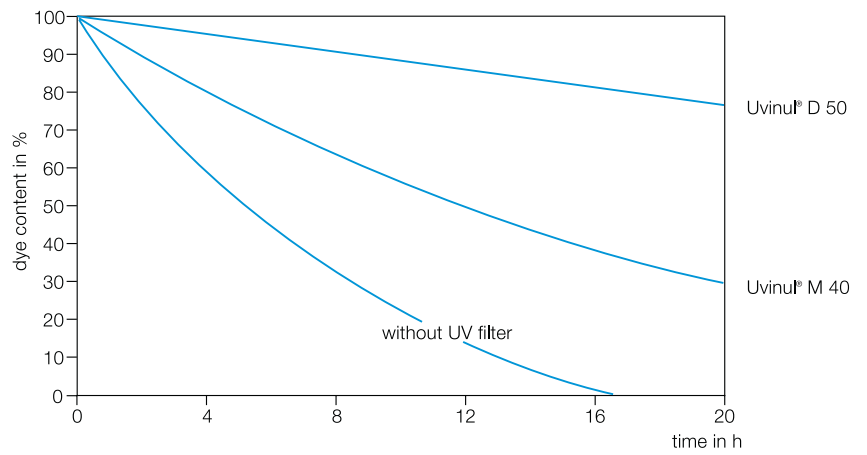
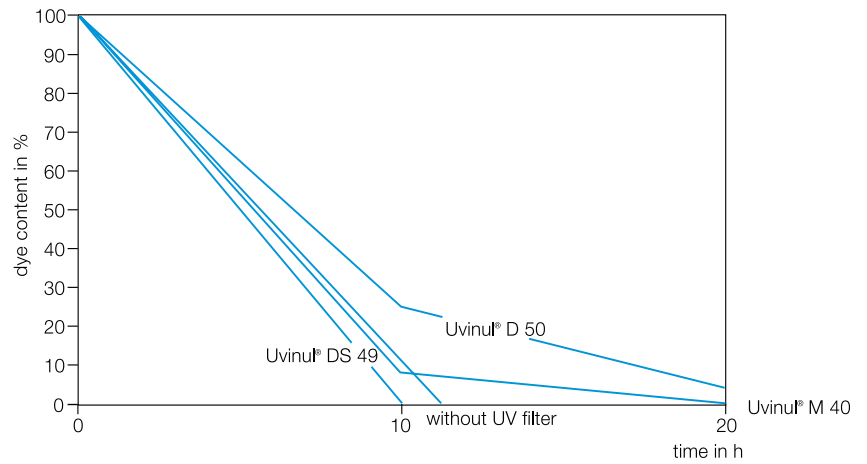
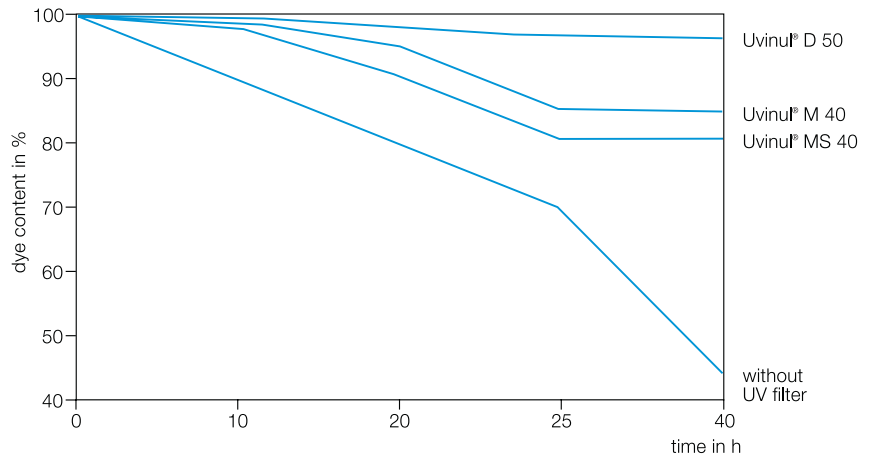


Fig. 3 Sicovit® Azorubine 85 E 122**Fig. 4 Sicovit® Indigotine 85 E 132****Fig. 5 FD&C Blue No. 1**

Applications

Foods and drugs

Dyes are mainly used in aqueous preparations, the confectionery industry, and sugar coating.

By virtue of their good hiding power, pigments are used in sugar and film coating and similar processes.

Cosmetics

In the field of cosmetics, examples of the applications in which colorants are used are as follows:

The list is by no means complete.

	Water-soluble dyes	Pigments
Shampoo	x	
Shower-bath	x	
Bubble bath	x	
Deodorants	x	
Eau de toilette	x	
Toothpaste	x	
Soap		x
Lipstick		x
Mascara		x
Eye shadow		x
Make-up		x

The stability of the colorant in the medium concerned must be verified by experiment in each case. These colorants are unsuitable for dyeing hair. Suggested formulations for the various applications will be given on request.

Storage

Sicovit® and Sicomet® colorants have a storage stability of at least 5 years (provided that they are stored in unopened original containers, protected from light, and under normal conditions of temperature and humidity).

Once a container has been opened to remove part of the contents, it must be tightly closed again, as otherwise the absorption of moisture may cause the dye content to decrease and favour the growth of microorganisms.

Safety Data Sheet

A Safety Data Sheet for each Sicovit®/Sicomet® is available.

Formulations**Mascara*****No. 67/00013**

	%	Ingredients	Supplier	INCI name
A	14.00	Water, dem.		Aqua
	q.s.	Preservative		
	2.50	Pluracare® F 127	(1)	Poloxamer 407
	3.50	Luviskol® K 30	(1)	PVP
	11.00	Ethanol		Alcohol
	0.70	Triethanolamine Care	(1)	Triethanolamine
B	0.52	Carbopol 934	(6)	Carbomer
	57.78	Water, dem.		Aqua
C	10.00	Sicovit® Black 80 E 172	(1)	C. I. 77 499, Iron Oxides

Production:

Solubilize the components of phase A. Dissolve phase B and stir it into phase A. Stir phase C into the solution of the combined phases A and B and homogenize thoroughly.

Properties:

Viscosity: 30.000 mPa·s
pH value: appr. 7

*Please note:
formulation not approved in Japan

After shave**No. 07/00005**

	%	Ingredients	Supplier	INCI name
A	60.00	Ethanol abs.		Alcohol
	0.20	Bisabolol nat	(1)	Bisabolol
	3.00	Cremonophor® CO 40	(1)	PEG-40 Hydrogenated Castor Oil
	0.10	Menthol	(4)	Menthol
	0.50	Perfume		
	3.00	D-Panthenol 50 P	(1)	Panthenol, Propylene Glycol
	33.20	Water, dem.		Aqua
	q.s.	Sicovit® Chinolin-gelb 70 E 104	(1)	C. I. 47 005, Acid Yellow 3
	q.s.	FD&C Blue No. 1	(1)	C.I. 42 090 Acid Blue 9

Production:

Dissolve phase A clearly. The pH value has be adjusted to 5.0 by using citric acid.

Conditioning shampoo for damaged hair with vitamins**No. 08/00600**

	%	Ingredients	Supplier	INCI name
A	12.00	Texapon N 70	(27)	Sodium Laureth Sulfate
	5.00	Tego Betain L 7	(44)	Cocamidopropyl Betaine
	5.00	Plantacare 2000	(27)	Decyl Glucoside
	3.00	Euperlan PK 771	(27)	Sodium Laureth Sulfate, Glycol Distearate, Cocamide MEA, Laureth-10
	0.20	Phytantriol		Phytantriol
	0.10	Vitamin E Acetate	(1)	Tocopheryl Acetate
	q.s.	Perfume		
B	64.00	Water dem.		Aqua
	7.70	Luviquat® Care	(1)	Polyquaternium-44
	q.s.	Preservative		
	1.00	D-Panthenol USP	(1)	Panthenol
	q.s.	Citric Acid	(20)	Citric Acid
	q.s.	Sicovit® Yellow Orange 85 E 110	(1)	C. I. 15 985, Sunset Yellow
	2.00	Sodium Chloride	(20)	Sodium Chloride

Production:

Weigh out the components of phase A and mix them. Add the components of phase B one after another and dissolve them. Adjust the pH value to 6-7.

Properties:

Viscosity: 3250 mPa·s Brookfield RVD VII+
pH value: 6.7

Mild shampoo for sensitive scalp**No. 08/00598**

	%	Ingredients	Supplier	INCI name
A	40.00	Texapon NSO	(27)	Sodium Laureth Sulfate
	5.00	Avanel® S 150 CG	(1)	Sodium C12-15 Pareth-15 Sulfonate
	5.00	Plantacare 2000	(27)	Decyl Glucoside
	q.s.	Perfume		
	0.10	Phytantriol		Phytantriol
B	38.20	Water dem.		Aqua
	7.70	Luviquat® Care	(1)	Polyquaternium-44
	1.00	D-Panthenol USP	(1)	Panthenol
	q.s.	Preservative		
	1.00	Rewopal LA 3	(44)	Laureth-3
	2.00	Sodium Chloride	(20)	Sodium Chloride

Production:

Weigh out the components of phase A and mix them. Add the components of phase B one after another and dissolve them clearly.

Properties:

Viscosity: 2050 mPa·s Brookfield RVD VII+
pH value: 6.9

**Neutralizing shampoo with Luviquat® Care
for „Ethnic hair care“****No. 08/00584**

	%	Ingredients	Supplier	INCI name
A	40.00	Texapon NSO	(27)	Sodium Laureth Sulfate
	10.00	Tego Betain L 7	(44)	Cocamidopropyl Betaine
	3.00	Euperlan PK 771	(27)	Sodium Laureth Sulfate, Glycol Distearate, Cocamide MEA, Laureth-10
	q.s.	Perfume		
	0.50	Wacker Belsil DMC 6031	(156)	PEG/PPG-25/25 Dimethicone
	3.00	Lamesoft PO 65	(27)	Coco-Glucoside Glyceryl Oleate
B	7.70	Luviquat® Care	(1)	Polyquaternium-44
	q.s.	Preservative		
	34.20	Water dem.		Aqua
	q.s.	Sicovit® Yellow Orange 85 E 110	(1)	C. I. 15 985, Sunset Yellow
	q.s.	Citric Acid	(20)	Citric Acid
C	1.50	Sodium Chloride	(20)	Sodium Chloride

Production:

Weigh out the components of phase A and mix them. Add the components of phase B one after another and dissolve them. Adjust the pH-value to about 3.0-3.5. Dissolve phase C into the solution of phases A and B.

Properties:

Viscosity: 2300 mPa·s Brookfield RVD VII+
pH value: 3.4

Face Lotion**No. 52/00015**

	%	Ingredients	Supplier	INCI name
A	3.00	Cremophor® CO 40	(1)	PEG-40 Hydrogenated Castor Oil
	q.s.	Perfume		
	0.10	Bisabolol nat.	(1)	Bisabolol
	78.40	Water, dem.		Aqua
B	3.00	1,2-Propylene Glycol Care	(1)	Propylene Glycol
	2.00	Witch Hazel Distillate		Witch hazel (Hamamelis Virginiana) Distillate
	q.s.	Sicovit® Patent Blue 85 E 131	(1)	C. I. 42 051, Acid Blue 3
	15.00	Ethanol 96 %		Alcohol

Production:

Solubilize phase A. Weigh phase B into phase A and dissolve clearly.
Adjust the pH value to about 5-6.

After shave gel**No. 07/00018**

	%	Ingredients	Supplier	INCI name
A	0.60	Carabopol 940	(6)	Carbomer
	40.00	Water dem.		Aqua
B	0.80	Triethanolamine Care	(1)	Triethanolamine
C	q.s.	Cremophor® CO 410	(1)	PEG-40 Hydrogenated Castor Oil
	q.s.	Perfume		
	15.00	Ethanol 96%		Alcohol
	0.10	Menthol	(20)	Menthol
	4.00	D-Panthenol 50 P	(1)	Panthenol, Propylene Glycol
	0.01	Uvinul® D 50	(1)	Benzophenone-2
	q.s.	Sicovit® Patent Blue 85 E 131	(1)	C. I. 42 051, Acid Blue 3
	39.49	Water dem.		Aqua

Production:

Allow phase A to swell and neutralize with phase B. Solubilize phase C and stir it into the neutralized phase A.

Properties:

Viscosity: 6000 mPa·s Haake Viscotester VT-02
pH value: 7.0

Literature

- [1] Regulation 94/36/EC of the European Parliament and the Council of 30. 6. 1994 on dyes authorized for use in foods.
- [2] Regulation 95/45/EC of the Commission of 26 July 1995 to lay down specific purity criteria for food dyes.
- [3] Verordnung zur Neuordnung lebensmittelrechtlicher Vorschriften über Zusatzstoffe (German ordinance).
- [4] Council Directive for approximation of the rules of the member states regarding the colouring matter authorized for use in drugs, 12 December 1977, 78/25/EC, Official Journal of the European Community 265/78.
- [5] Arzneimittelfarbstoffverordnung, 25 April 1982, BGBl. I, 1237 (German ordinance).
- [6] Code of Federal Regulations, Title 21, Part 73, Subpart B and Part 74, Subpart B.
- [7] Council Directive to harmonize the legislation of the member states for cosmetic agents 76/768/EC of 27 July 1976, Official Journal of the European Community 169/76.
- [8] Kosmetikverordnung vom 19. Juni 1985, BGBl. I, 1082 (German Regulation).

Note

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