

The prescribing of sunscreen preparations:

A guide for the general practitioner

— B Summers

— R Summers



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Curriculum vitae

Professor and Mrs Summers are presently at Medunsa where he is Head of the School of Pharmacy and she is Senior Lecturer (part-time) in the Department of Pharmaceutics

Beverley Summers obtained her B Pharm degree from Nottingham and her MSc (Med) from Medunsa. Rob Summers obtained his BSc, BSc (Honours) and MSc degrees at Rhodes and his PhD from the Postgraduate School of Studies at the University of Bradford. They have lived in Pretoria for four years and have 3 boys and a girl ranging in age from 19 to 5

Summary

Sunscreen preparations are needed almost as a daily routine protection in the South African climate. The properties of the different products on the South African market are given in up-to-date charts.

S Afr Fam Pract 1987; 8 (11): 440-6

KEYWORDS: Sunscreening agents; Climate; Carcinoma, basal cell; Carcinoma, squamous cell

Our previous paper in *SA Family Practice*¹ in 1984 aroused considerable interest. Since then several changes have occurred in the products and in the formulation of sunscreen preparations available on the South African market. We therefore present an update on these products with recommendations for their selection.

Sunburn occurs as a result of exposure to UVB (290-320 nm wavelength). The maximum damage is caused by rays of 307,4 nm². Epidemiological evidence implicates UVB as a cause of solar keratosis, basal cell and squamous skin cancers and malignant melanoma³. Protection against UVB is therefore imperative, even during the South African winter. Highveld winters are also dangerous due to the clear skies and high altitude.

UVA (320-400 nm) enhances the erythema caused by UVB as well as being implicated in the longer-term effects of sun exposure such as skin ageing and loss of elasticity². The combined effects of UVA and UVB radiation are greater than the sum of the damage caused by the individual components⁴. This phenomenon is described as photo-augmentation. It is therefore strongly recommended that sunscreens should be prescribed which protect against both UVA and UVB.

CHART 1
Chemical groups of sunscreen agents and wavelength ranges absorbed

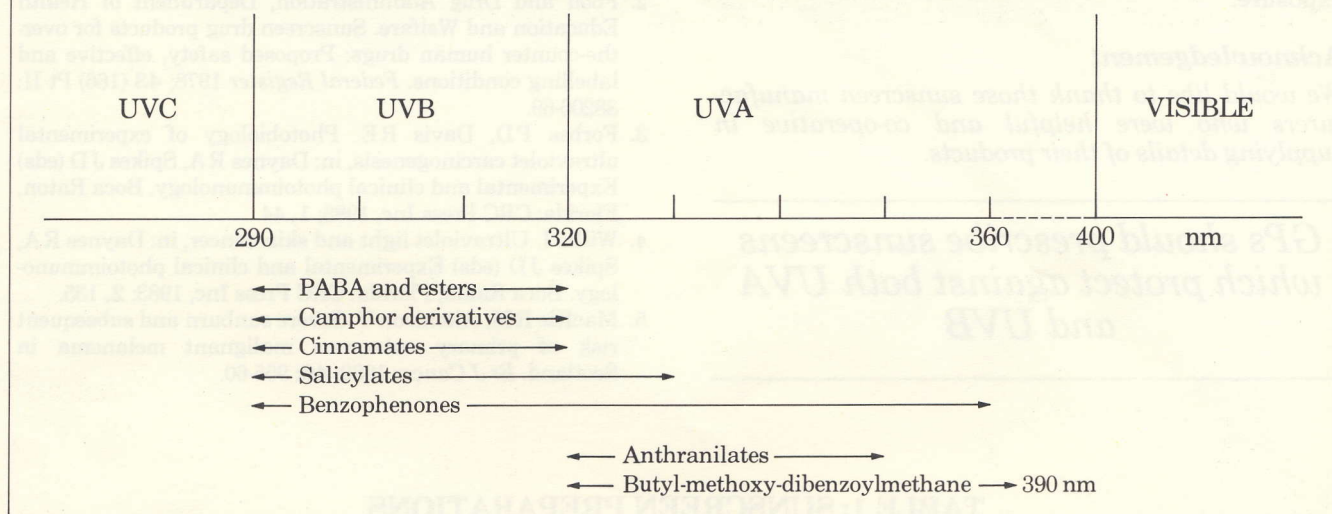


Chart 1 shows the chemical groups of sunscreen agents and the wavelength ranges absorbed by them.

Tables 1 and 2 provide detailed lists of sunscreen preparations which are available on the South African market.

The following products give protection against both UVA and UVB:

Ambre Solaire*	SPF 3-15
Annique	SPF 19
Avroy Schlain	SPF 6 & 20
Charles of the Ritz	SPF 22
Clarins	SPF 2-9
Clinique	SPF 10, 11 & 15
Elizabeth Arden	SPF 8 & 15
Everysun	SPF 16
Estee Lauder	SPF 4-12
Justine	SPF 10 & 30
Lancome	SPF 4 & 8
Nivea*	SPF 8 & 14
Payot	SPF 3-9
Piz Buin	SPF 2-24
Princess*	SPF 8
Roc	SPF 10 & 15
Sundown	SPF 15
Uvistat	SPF 5-10

* These products contain agents which are not FDA-approved.

If a sunscreen is required to be used in water then the following should be taken into account: according to the FDA regulations a "sweat-resistant" sunscreen will withstand 30 minutes of heavy sweating, a "water-resistant" product will withstand 40 minutes in water, and a "waterproof"

product will withstand 80 minutes in water, all with no reduction in SPF².

Below are products which give protection against UVA+UVB and which may be used in water:

- Some degree of water-resistance is implied in the package labelling of the following:
 - Estee Lauder Waterworld SPF 12
- Water-resistant (FDA definition):
 - Nivea SPF 8
 - Piz Buin SPF 2-24
 - Princess SPF 8
- Waterproof (FDA definition):
 - Sundown SPF 15

The combined effects of UVA and UVB radiation are greater than the sum of the damage caused by the individual components

For acne patients an oil-free lotion may be necessary in which case Clinique Oil-free lotions SPF 10 and 15 are available. They protect against UVA and UVB. Sundown lotion is also broad spectrum in its screening, non-comedogenic and waterproof as well as being reasonably priced.

Ideally, sunscreens should be used as a daily routine, particularly by those with skin types I to III, ie European and Mediterranean skin types. The earlier in life that sun protection starts the better. Basal cell and squamous cell carcinoma occurrence is related to the cumulative sun exposure experienced by the individual², whereas malignant

melanomas have been related to acute episodes of sun exposure⁵. A great deal still needs to be done to educate the public at large about the dangers of sun exposure.

Acknowledgement

We would like to thank those sunscreen manufacturers who were helpful and co-operative in supplying details of their products.

GPs should prescribe sunscreens which protect against both UVA and UVB

References

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3. Forbes PD, Davis RE. Photobiology of experimental ultraviolet carcinogenesis, in: Daynes RA, Spikes JD (eds) *Experimental and clinical photoimmunology*. Boca Raton, Florida: CRC Press Inc, 1983; 1, 44.
4. Willis I. Ultraviolet light and skin cancer, in: Daynes RA, Spikes JD (eds) *Experimental and clinical photoimmunology*. Boca Raton, Florida: CRC Press Inc, 1983; 2, 135.
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TABLE 1: SUNSCREEN PREPARATIONS

Brand Name	Manufacturer	Active Ingredient	Concentration and Products	SPF	UV Wave-length filtered (nm)	Possible Adverse Effects	
Ambre Solaire	Elebelle (Pty) Ltd	Benzophenone 3	1% } Lotion	3	UVB/A* 270-350	X	
		Camphor derivative	2,5% }			?	
		Benzophenone 3	1% } Lotion	5	UVB/A* 270-350	X	
		Octyl methoxy cinnamate	1% }			UVB 280-320	X
		Camphor derivative	3,5% }	15	UVB 280-320	?	?
		Octyl methoxy cinnamate	5% }			UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1% } Sunblock			UVA 320-390	?
		Camphor derivative	4% }		?	?	
		Titanium dioxide	2% }		UVA/B**	X	
Canyon Organics	Canyon Organics	Ethyl hexyl paramethoxy cinnamate	3% Lotion	4	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	(-) Moisturiser	2	UVB 280-320	X	
EverySun	Richardson-Vicks	Ethyl hexyl paramethoxy cinnamate	2% Aqua sport	2	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	3% Aqua sport	3	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	6% Aqua sport	5	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	2% Milk	2	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	7,5% Milk	5	UVB 280-320	X	
		Butyl methoxy dibenzoyl methane	2,5% } UV Blocker	16	UVA 320-390		
		Ethyl hexyl paramethoxy cinnamate	3,5% }		UVB 280-320	X	
Nivea	Smith & Nephew	Ethyl hexyl paramethoxy cinnamate	2,5% Oil	2	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	2% } Water-resistant		UVB 280-320	X	
		Methyl benzylidene camphor	1,5% } Lotion	3	UVB 290-320	Not FDA-approved	
		Ethyl hexyl paramethoxy cinnamate	1,3% } Insect-resistant				
				Lotion	3	UVB 280-320	X
		Ethyl hexyl paramethoxy cinnamate	4% Coconut Lotion	3	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	4% Lotion	4	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	4,5% } Water resistant	5	UVB 280-320	X	
		Methyl benzylidene camphor	1,5% }				
		Ethyl hexyl paramethoxy cinnamate	6,5% } Water resistant	8	UVB 280-320	Not FDA-approved	
		Methyl benzylidene camphor	2% }				
		Ethyl hexyl paramethoxy cinnamate	1% } Lotion	14	UVA 320-390	Not FDA-approved	
		Butyl methoxy dibenzoyl methane	1% }				
		Ethyl hexyl paramethoxy cinnamate	2,7% }	UVB 280-320	X		
		Butyl methoxy dibenzoyl methane	0,5% }				
Ethyl hexyl paramethoxy cinnamate	1% } Sunblock	UVB 290-320	Not FDA-approved				
Methyl benzylidene camphor	1% }						
		Phenyl benzimidazole 5 sulphonic acid	3,8% }	UVB 290-320	X		
Pabina	SCS Pharmalab (Noristan)	Para amino benzoic acid	5%	(-) UVB	290-320	Photosensitivity-dermatitis (its use in cosmetics is prohibited in some countries)	

Table 1 - continued

Brand Name	Manufacturer	Active Ingredient	Concentration and Products	SPF	UV Wave-length filtered (nm)	Possible Adverse Effects
Piz Buin	Swisspharm (Pty) Ltd	Ethyl hexyl paramethoxy cinnamate	3,6% } Lotion	4	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	0,4% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	4,5% } Lotion	6	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	0,8% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	5,4% } Lotion	8	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,3% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	5,4% } Lotion	8	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,3% } (children)		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	7,2% } Lotion	12	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,5% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	3,2% } Cream	4	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	0,4% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	4,0% } Cream	6	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	0,8% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	4,8% } Cream	8	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,3% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	5,4% } Cream	12	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,3% }		UVA 320-390	
		Zinc oxide	5,4% }	UVA&B**		
		Ethyl hexyl paramethoxy cinnamate	6,0% } Cream	12	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,5% }		UVA 320-390	
		Zinc oxide	(-)	UVA&B**		
		Ethyl hexyl paramethoxy cinnamate	6,8% } Sun block	24	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,8% } cream		UVA 320-390	
		Zinc oxide	5,0% }	UVA&B**		X
		Titanium dioxide	1,8% }	UVA&B**		X
		Ethyl hexyl paramethoxy cinnamate	1,0% } Sun glamour	2	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,5% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	5,0% } Stick	8	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	1,5% }		UVA 320-390	
		Ethyl hexyl paramethoxy cinnamate	7,5% } Combi/stick	15	UVB 280-320	X
		Butyl methoxy dibenzoyl methane	4,0% } cream		UVA 320-390	
Ethyl hexyl paramethoxy cinnamate	5,5% } Combi/stick	15	UVB 280-320	X		
Butyl methoxy dibenzoyl methane	0,7% } stick		UVA 320-390			
Pigments	(-)	UVA&B**		X		
Ethyl hexyl paramethoxy cinnamate	1,3% } Classic	2	UVB 280-320	X		
Butyl methoxy dibenzoyl methane	0,4% }		UVA 320-390			
Ethyl hexyl paramethoxy cinnamate	1,3% } Classic	2	UVB 280-320	X		
Butyl methoxy dibenzoyl methane	0,4% }		UVA 320-390			
Ethyl hexyl paramethoxy cinnamate	1,3% } Classic	2	UVB 280-320	X		
Butyl methoxy dibenzoyl methane	0,4% }		UVA 320-390			
Ethyl hexyl paramethoxy cinnamate	1,5% } Classic	2	UVB 280-320	X		
Butyl methoxy dibenzoyl methane	0,5% }		UVA 320-390			
Princess		Ethyl hexyl paramethoxy cinnamate	2,5% } Oil	2	UVB 280-320	X
		Ethyl hexyl paramethoxy cinnamate	4,5% } Water resistant	5	UVB 280-320	X
		Methyl benzylidene camphor	1,5% } Lotion		UVB 280-320	Not FDA-approved
		Ethyl hexyl paramethoxy cinnamate	6,5% } Water resistant	8	UVB 280-320	X
		Methyl benzylidene camphor	2% } Lotion		UVB 280-320	Not FDA-approved
		Butyl methoxy dibenzoyl methane	1% }		UVA 320-390	
Spectraban	Stiefel Labs UK	Padimate	2,5% } Lotion	4	UVB 280-320	Widespread photo-sensitivity and contact dermatitis
		Padimate	2,5% }	15	UVB 280-320	
		Para amino benzoic acid	5,0% }		UVB 280-320	
Sundown	Johnson & Johnson	Padimate 0	6,5% } Waterproof	15	UVB 280-315	X
		Benzophenone 3	3% }		UVB/A* 270-350	
		Padimate 0	7% } Stick	15	UVB 280-315	X
		Benzophenone 3	3% }		UVB/A* 270-350	
Tan Guard	Propan Lipworth	Para amino benzoic acid	5% } Lotion	(-)	UVB 280-320	Photosensitivity dermatitis (its use in cosmetics is prohibited in some countries)

Table 1 - continued

Brand Name	Manufacturer	Active Ingredient	Concentration and Products	SPF	UV Wave-length filtered (nm)	Possible Adverse Effects	
Uvistat	Boehringer Ingelheim	Mexenone	4% Cream	5	UVB/A*	250-350	Stated to be non-irritant
		Mexenone	4% } Water resistant	8	UVB/A*	250-350	
		Ethyl hexyl paramethoxy cinnamate	7,5% } cream		UVB	280-320	X
		Mexenone	4% } High protection	10	UVB/A*	250-350	
		Ethyl hexyl paramethoxy cinnamate	7,5% } cream		UVB	280-320	
Uvistat-L		Mexenone	4%	(-)	UVB/A*	250-350	X
Uvitan	Boehringer Ingelheim	Para amino benzoic acid	1,65%	(-)	UVB	290-320	Photosensitivity dermatitis (its use in cosmetics is prohibited in some countries)
Vita Force	Pharma Natura	Para amino benzoic acid	5% PABA 5000 Cream	(-)	UVB	290-320	Photosensitivity dermatitis (its use in cosmetics is prohibited in some countries)
Xeroderm	Van Dyk Pharmaceutical Products	Ethyl hexyl paramethoxy cinnamate	7,5% } Xeroderm	16	UVB UVA	280-320 320-390	X
		Butyl methoxy dibenzoyl methane	2,0% }				

* UVB and part UVA

(-) Information not supplied by manufacturer

X Rare cases of photosensitivity occur

** Reflects UVA/B and some visible

X No adverse effects listed in references

TABLE 2: SUNSCREEN PRODUCTS FROM COSMETIC HOUSES

Brand Name	Manufacturer	Active Ingredient	Concentration and Products	SPF	UV Wave-length filtered (nm)	Possible Adverse Effects	
Annique	Forever Young CC	Ethyl hexyl paramethoxy cinnamate	4% Lotion	7	UVB	280-320	X
		Ethyl hexyl paramethoxy cinnamate	7,5% } Sunblock	19	UVB	280-320	X
		Butyl methoxy dibenzoyl methane	3,0% } Lotion		UVA	320-390	
Avroy Schlain	Avroy Schlain Cosmetics	Padimate 0	8,0% } Total sunblock	20	UVB UVA&B	290-315 270-350	X X
		Benzophenone 3	3,0% } lotion				
		Padimate 0	5,0% } Tahllita Day	6	UVB UVA	290-315 320-390	X X
		Butyl methoxy dibenzoyl methane	2,0% } cream				
Biotherm	Biotherm	Benzophenone 2	(-) Antiwrinkle cream	2,4,6	UVB/A*	280-330	?
		(-)	(-) Total Sun screen	15		?	?
		(-)	(-) Sun tanning milk	2,4,6		?	?
		(-)	(-) Stick for eyes and lips	8		?	?
Charles of the Ritz	Charles of the Ritz	Padimate 0	3,3% Cream	6	UVB	290-315	X
		Padimate	3,6% Face cream	6	UVB	290-320	Widespread photosensitivity and contact dermatitis
		Padimate	1,5% Low filter	3	UVB	290-320	
		Padimate 0	7% } Ultra block	22	UVB UVB/A* UVA&B	290-315 270-350 300-380	X X X
Benzophenone 3	2,5% }						
Benzophenone 8	0,5% }						

Table 2 - continued

Brand Name	Manufacturer	Active Ingredient	Concentration and Products	SPF	UV Wave-length filtered (nm)	Possible Adverse Effects	
Clarins	Clarins	Ethyl hexyl paramethoxy cinnamate	(-) } Gel	2	UVB	280-320	X
		Benzophenone 3	(-) } Gel		UVB&A*	270-350	X
		Ethyl hexyl paramethoxy cinnamate	(-) } Milk	3,5	UVB	280-320	X
		Butyl methoxy dibenzoyl methane	(-) } Milk		UVA	320-390	
		Phenyl benzimidazole 5 sulphonic acid	(-) } Tinted milk	4,5	UVB	250-320	X
		Ethyl hexyl paramethoxy cinnamate	(-) } Tinted milk		UVB	280-320	X
		Butyl methoxy dibenzoyl methane	(-) } Tinted milk		UVA	320-390	
		Phenyl benzimidazole 5 sulphonic acid	(-) } Tinted milk		UVB	250-320	X
		Ethyl hexyl paramethoxy cinnamate	(-) } 'Total' screen	9	UVB	280-320	X
		Butyl methoxy dibenzoyl methane	(-) } 'Total' screen		UVA	320-390	
		Benzophenone 3	(-) } 'Total' screen		UVB	270-320	X
		Titanium Dioxide	(-) } Oil	2	UVA/B**		
		Ethyl hexyl paramethoxy cinnamate	(-) } Oil		UVB	280-320	X
		Butyl methoxy dibenzoyl methane	(-) } Self-tanning milk	3,5	UVA	320-390	
		Ethyl hexyl paramethoxy cinnamate	(-) } Self-tanning milk		UVB	280-320	X
		Butyl methoxy dibenzoyl methane	(-) } Wrinkle control cream	6	UVA	320-390	
Ethyl hexyl paramethoxy cinnamate	(-) } Wrinkle control cream	UVB	280-320		X		
Butyl methoxy dibenzoyl methane	(-) } Wrinkle control cream	UVA	320-390				
Phenyl benzimidazole 5 sulphonic acid	(-) } Wrinkle control cream		UVB	250-320	X		
Clinique	Clinique	Padimate 0	1,5% } Suntan encourager	(-)	UVB	290-315	X
		Benzophenone 4	0,5% } Suntan encourager		?		X
		Padimate 0	3% } Sunblock	8	UVB	290-315	X
		Benzophenone 4	2% } Sunblock		?		X
		Padimate 0	7% } Oil-free sunblock	10	UVB	290-315	X
		Benzophenone 3	2% } Oil-free sunblock		UVB/A*	270-350	X
		Padimate 0	7% } Oil-free sunblock	15	UVB	290-315	X
		Benzophenone 3	2,5% } Oil-free sunblock		UVB/A*	270-350	X
		Ethyl hexyl paramethoxy cinnamate	2,5% } Sunblock	19	UVB	280-320	X
		Padimate 0	5% } Sunblock		UVB	290-315	X
		Phenyl benzimidazole 5 sulphonic acid	5% } Sunblock	11	UVB	250-320	X
		Padimate 0	4,9% } Lip block		UVB	290-315	X
Benzophenone 3	2,1% } Lip block		UVB/A*	270-350	X		
Elizabeth Arden	Elizabeth Arden	Padimate 0	3% } Lotion	4	UVB	290-315	X
		Padimate 0	3% } Cream		UVB	290-315	X
		Benzophenone 3	2% } Cream	8	UVB/A*	270-350	X
		Padimate 0	8% } Cream		UVB	290-315	X
		Benzophenone 3	3% } Cream	15	UVB/A*	270-350	X
		Padimate 0	2% } Moisturiser		(-)	UVB	290-315
		Padimate 0	2% } Energising extract	(-)	UVB	290-315	X
		Padimate 0	3% } Soothing care make-up	(-)	UVB	290-315	X
Ellen Betrix	HM Betrix & Co Frankfurt Distributed in SA by Jothenil	Methyl benzylidene camphor	3% } Waterproof jelly	2	UVB	290-320	Not FDA-approved
		Methyl benzylidene camphor	6% } Stick		UVB	290-320	Not FDA-approved
		Ethyl hexyl paramethoxy cinnamate	5% } Waterproof milk	3	UVB	280-320	X
		Padimate 0	8% } Waterproof milk		UVB	290-315	X
		Methyl benzylidene camphor	3% } Waterproof cream	6	UVB	290-320	Not FDA-approved
		Ethyl hexyl paramethoxy cinnamate	3% } Waterproof cream		UVB	280-320	X
		Padimate 0	4% } Waterproof cream	8	UVB	290-315	X
		Ethyl hexyl paramethoxy cinnamate	4% } Waterproof cream		UVB	280-320	X
		Ethyl hexyl paramethoxy cinnamate	2% } Quick Tan (self-tan)	2	UVB	280-320	X
Ethyl hexyl paramethoxy cinnamate	2% } Quick Bronze (self-tan)	UVB	280-320		X		
Estée Lauder	Estée Lauder	Ethyl hexyl paramethoxy cinnamate	1,5% } Milk	2	UVB	280-320	X
		Benzophenone 4	0,1% } Milk		?		X
		Ethyl hexyl paramethoxy cinnamate	3% } Lotion	4	UVB	280-320	X
		Benzophenone 3	(-) } Lotion		UVB/A*	270-350	X
		Ethyl hexyl paramethoxy cinnamate	5% } Lipshield	10	UVB	280-320	X
		Benzophenone 3	0,5% } Lipshield		UVB/A*	270-350	X
		Padimate 0	7% } Waterworld sunscreen	12	UVB	290-315	X
		Benzophenone 3	3% } Waterworld sunscreen		UVB/A*	270-350	X
		Ethyl hexyl paramethoxy cinnamate	3,75% } Antiwrinkle	6	UVB	280-320	X
		Benzophenone 3	0,5% } Antiwrinkle		UVB/A*	270-350	X
		Ethyl hexyl paramethoxy cinnamate	6% } Ultra	8	UVB	280-320	X
Benzophenone 3	1% } Ultra	UVB/A*	270-350		X		

Table 2 - continued

Brand Name	Manufacturer	Active Ingredient	Concentration and Products	SPF	UV Wave-length filtered (nm)	Possible Adverse Effects	
Justine	Justine Cosmetics	Ethyl hexyl paramethoxy cinnamate	2,5% Just Tan	2	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	1,7% Just Tan Gel	2	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	4,0% Just Tan	4	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	Lotion				
		Ethyl hexyl paramethoxy cinnamate	4,0% Waterfast	4	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	7,5% } Block Out	10	UVB 280-320	X	
		Butyl methoxy dibenzoyl methane	3,0% } cream		UVA 320-390	?	
		Ethyl hexyl paramethoxy cinnamate	7,5% } Block Out	10	UVB 280-320	X	
		Butyl methoxy dibenzoyl methane	4,0% } balm		UVA 320-390	?	
		Ethyl hexyl paramethoxy cinnamate	7,5% } Ultra block	30	UVB 280-320	X	
Butyl methoxy dibenzoyl methane	2,0% }	UVA 320-390	?				
Benzophenone 3	4,5% }	UVB/A* 270-350	X				
Lancôme	Lancôme	Ethyl hexyl paramethoxy cinnamate	2% Oil	2	UVB 280-320	X	
		Ethyl hexyl paramethoxy cinnamate	2,5% } Milk & anti-	4	UVB 280-320	X	
		Benzophenone 3	2% } wrinkle cream		UVB/A* 270-350	X	
		Ethyl hexyl paramethoxy cinnamate	7,5% } Creme	8	UVB 280-320	X	
		Benzophenone 3	3,5% }		UVB/A* 270-350	X	
Payot	Laboratories Payot	Ethyl hexyl paramethoxy cinnamate	(-)		UVB 280-320	X	
		Methyl benzylidene camphor	(-)	3-9	UVB 290-320	Not FDA-approved	
		Butyl methoxy dibenzoyl methane	(-)		UVA 320-390		
Reeva	Reeva Forman Ltd	Ethyl hexyl paramethoxy cinnamate	2% Lotion	4	UVB 290-320	X	
		Ethyl hexyl paramethoxy cinnamate	5% Lotion	10	UVB 290-320	X	
Roc	Roc Internationale	A cinnamic ester	(-)	Lotion	2	?	?
		A cinnamic ester	(-)	} Antiwrinkle	4	?	?
		Benzimidazole derivative	(-)				
		A cinnamic ester	(-)	Cream	4	?	?
		A cinnamic ester	(-)	Lotion	5	?	?
		A cinnamic ester	(-)	} Lipscreen	5	?	?
		Zinc oxide	(-)				
		A cinnamic ester	(-)	} Cream	8	UVA/B**	?
		Zinc oxide	(-)				
		A cinnamic ester	(-)	} Facial	10	?	?
		Zinc oxide	(-)				
		A cinnamic ester	(-)	} Invisible	15	?	?
		Benzimidazole derivative	(-)				
		Butyl methoxy dibenzoyl methane	(-)	cream	UVA	320-390	
		A cinnamic ester	(-)	} Opaque	15	?	?
Mineral pigments	(-)	sunblock	?				

* UVB and part UVA

(-) Information not supplied by manufacturer

X Rare cases of photosensitivity occur

X No adverse effects listed in references

** UVA/B and some visible

? Wavelength range and possible adverse effects indeterminable

ALL ALERGENEN VERBODEN IN 'T BAAU'

DILEMMAS IN PRIMÈRESORG



75 OF ASSA, DOCTER*

ALLERGIEPROBLEME IN KINDERSORG

DE LEEUWEN HANDELSMAATSCHAP VAN DE NEDERLANDSE PHARMACEUTISCHE INDUSTRIE B.V. (N.P.I.)

ALLE RECHTEN VOORBEHOUDEN. NIET TE VERKOPEN BIJZONDER VERMINDERDE PRIJZEN.

DE VERKOPING VAN DEZE PRODUCTEN IS BEPERKT TOT DE VERKOPING VAN DEZE PRODUCTEN BIJZONDER VERMINDERDE PRIJZEN.

ALL ALERGENEN VERBODEN IN 'T BAAU'

DILEMMAS IN PRIMÈRESORG



*WAAKZAMIGHEID IN 'T BAAU' NIET VERBODEN IN 'T BAAU'

REKENAARS IN PRIMÈRESORG

DE LEEUWEN HANDELSMAATSCHAP VAN DE NEDERLANDSE PHARMACEUTISCHE INDUSTRIE B.V. (N.P.I.)

ALLE RECHTEN VOORBEHOUDEN. NIET TE VERKOPEN BIJZONDER VERMINDERDE PRIJZEN.

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