Product Information File (PIF) Summary

1. Product Description

Product name

Melovibes Aloe Vera Gel with 2000mg CBD

Volume

50ml

Intended use of the product

Composition type:	Gel
General purpose:	Moisturiser and Conditioner
Main action:	Moisturisation and Conditioning of skin
Target population:	Adults

Integral composition of the product

Trade Name	INCI	Function	Conc (% w/w)
Aloe Vera Gel	AQUA, ALOE BARBADENSIS LEAF EXTRACT, POLYSORBATE-20, CARBOMER, PHENOXYETHANOL, ETHYLHEXYLGLYCERIN, SODIUM HYDROXIDE, BENZYL ALCOHOL	Emollient, skin conditioning agents, viscosity increasing agent	95 - 97
GLYCERIN	GLYCERIN	Preservative	2
CBD	CANNABIDIOL	Anti-inflammatory	2 - 4

2. Toxicology Assessment

Local toxicity: Phototoxic materials are not included in this formulation at levels of concern. Nano materials are not included in this formulation.

The toxicological profile and concentration of ingredients in this product do not present a risk to human health when the product is used under normal or reasonably foreseeable conditions of use.

Margins of safety were calculated; the ingredients are considered safe.

REPORT PART A

A. QUANTITATIVE AND QUALITATIVE COMPOSITION OF THE COSMETIC PRODUCT(S) (INCLUDING THE CHEMICAL IDENTITY OF SUBSTANCES IN THE FORMULATION)

PRODUCT BASE FORMULATION: The following table details the formulation of the product base.

	FORMULATIO

INGREDIENT NAME	INCI NAME	CONC. BAND
ALOE VERA GEL	AQUA, ALOE BARBADENSIS LEAF EXTRACT, POLYSORBATE-20, CARBOMER, PHENOXYETHANOL, ETHYLHEXYLGLYCERIN, SODIUM HYDROXIDE, BENZYL ALCOHOL	A
CBD	CANNABIDIOL	F
GLYCERIN	GLYCERIN	F

PRODUCT VARIANT(S): The following table details the formulation of the variant(s) of the product.

	FORMULATIO

INGREDIENT NAME	INCI NAME	CONC. BAND
ALOE VERA GEL	AQUA, ALOE BARBADENSIS LEAF EXTRACT, POLYSORBATE-20, CARBOMER, PHENOXYETHANOL, ETHYLHEXYLGLYCERIN, SODIUM HYDROXIDE, BENZYL ALCOHOL	A
CBD	CANNABIDIOL	F
GLYCERIN	GLYCERIN	F

	FORMULATIO

INGREDIENT NAME	INCI NAME	CONC. BAND

ALOE VERA GEL	AQUA, ALOE BARBADENSIS LEAF EXTRACT, POLYSORBATE-20, CARBOMER, PHENOXYETHANOL, ETHYLHEXYLGLYCERIN, SODIUM HYDROXIDE, BENZYL ALCOHOL	A
CBD	CANNABIDIOL	E
GLYCERIN	GLYCERIN	F

B. PHYSICAL/CHEMICAL CHARACTERISTICS AND STABILITY OF THE COSMETIC PRODUCT(S) INCLUDING IMPURITIES, TRACES, AND PACKAGING MATERIAL INFORMATION.

PHYSICAL AND CHEMICAL PROPERTIES:

The colour and fragrance are characteristic of the fragrance and colourants used in the formulation (if any).

For detailed information regarding the physical and chemical characteristics of the raw materials please refer to the MSDS in the product information file (PIF) and Section 7 of this document.

The exact pH of the product has not been empirically determined but based on the understanding of similar products the expected pH is 5.5-6.5.

STABILITY AND REACTIVITY:

The product is expected to be nominally stable at ambient storage conditions – to be confirmed by manufacturer based on observation of previous products made.

No major interactions are expected - possible interaction between labile components of fragrance materials (esters, alcohols) - no resulting components that are likely to alter the toxicity profile of the initial ingredients.

A suggested shelf life of at least 30 months applies to the product. A PAO of 6 months applies to this product.

INGREDIENT PURITY:

Specific purity criteria do not apply. The purity of the ingredients in the formulation(s) is specified – where appropriate – in the MSDS documents in PIF. Pharmaceutical, food or cosmetic grade ingredients are used in the manufacture of the product(s). The manufacturer is responsible for ensuring the purity of the ingredients used and the quality of the raw materials.

PACKAGING MATERIAL:

No specific requirements. Inert cosmetic/food grade packaging must be used. The manufacturer is responsible for ensuring the suitability and quality of the packaging material.

C. MICROBIOLOGICAL QUALITY OF THE PRODUCT(S).

The product(s) has a low activity of water, and – under normal conditions of storage and/or use – does not support microbial growth. Product(s) is a Category 2 product:

For any cosmetic product classified as a "Category 2 Product", the total viable count (TVC) the TVC for aerobic mesophilic microorganisms should not exceed 1000cfu/g or mL of product. In addition, the pathogens Pseudomonas aeruginosa, Staphylococcus aureus and Candida albicans should not be detectable in 1g or 1mL of the product.

Microbiological quality testing was performed on the raw materials by the primary manufacturer. Further, specific microbiological testing is not required, nor recommended for this product(s).

D. NORMAL AND REASONABLY FORESEEABLE USE OF THE PRODUCT(S), TARGET POPULATIONS AND WARNINGS.

The product is a body butter / gel. It is intended for frequent application to the skin of the whole body.

It is a leave on product.

It is intended to be used by the general population.

The product is not intended for, nor is marketed for use on babies, infants, and children under 3 years of age.

The product(s) is not intended to be used on mucous membranes or on the eye area. There is no other reasonable or foreseeable use for this product(s).

There is no specific requirement for warnings required for the product labelling, however a general statement that these products are for external use only, should not be applied to the eye area, mucous membranes, broken or irritated skin is recommended. It is also recommended that a statement advising to discontinue use in the case of irritation should also be include.

E. PRODUCT AND SUBSTANCE EXPOSURE INFORMATION.

Exposure (under foreseeable conditional use) is by dermal absorption only. The retention factor of 100% has been applied (as per The SCCS Notes of Guidance for the Testing of Cosmetic Ingredients and their Safety Evaluation 10th Revision), and all calculations have been based on typical exposure values (as per RIVM Report 320104001/2006).

AREAS OF SPECIFIC EXPOSURE

Inhalation – not relevant for this type of product.

Dermal – this product is intended for use on the skin of the body.

Eye – not relevant for this type of product.

Ingestion – not relevant for this type of product.

EXPOSURE OF PRODUCT; BODY

PRODUCT AMOUNT PER APPLICATION[1] (G)	POTENTIAL FREQUENCY OF USE[1] (PER DAY)	MAXIMUM DAILY PRODUCT USE (G)	RETENTION FACTOR[2]	MAXIMUM DAILY PRODUCT EXPOSURE (MG)
5	1	5	1	5000

SUBSTANCE EXPOSURE DATA: BODY

INGREDIENT CONCENTRATION BAND	MAX. CONCENTRATION (% w/w)	DAILY SUBSTANCE EXPOSURE (mg/day)	SED (mg/kg/day)
A (75-100)	**100**	5000	83.333
B (50-75)	**75**	3750	62.5
C (25-50)	**50**	2500	41.667
D (10-25)	**25**	1250	20.833
E (5-10)	**10**	500	8.3333
F (1-5)	**5**	250	4.1667

G (0.1-1)	1	50	0.8333
< 0.1%	**0.1**	5	0.0833

1: Product amount per application, frequency of use and surface area exposed RIVM report 320104001/2006, H. J., Bremmer. 2: Retention factor THE SCCS NOTES OF GUIDANCE FOR THE TESTING OF COSMETIC INGREDIENTS AND THEIR SAFETY EVALUATION

11TH REVISION. †: Mean body weight used 60kg. ‡: Based on the product amount per application

F. UNDESIRABLE AND SERIOUS UNDESIRABLE EFFECTS

There were no undesirable or serious undesirable effects reported at the time this report was prepared. A record must be kept of any reported undesirable effects, and they must be notified to the relevant competent authority.

Based on the understanding of products of this type (and the raw materials used to produce them) it is not expected that any adverse effects will occur as a result of the normal, prescribed use of this product.

G. TOXICOLOGICAL PROFILE AND ANALYSIS OF SUBSTANCES – INCLUDING MoS.

The NOAEL values for each ingredient in the products assessed within this report were obtained. The margin of safety (MoS) value was determined for each ingredient using the following formula (as defined by the SCCS):

For the purposes of this toxicological assessment, a MoS of >100 is considered acceptable. Any ingredients with a MoS of less than 100 will have specific justification for their approval (if such approval is granted).

NOAEL values were obtained from published, repeat dose toxicity studies.

The following table details the NOAEL and MoS values for each relevant substance included in the formulations.

In addition to calculating the MoS, the TTC (threshold of toxicological concern) was determined where relevant. The following TTC apply to compounds, where relevant:

Cramer Class I	30ug/kg/day
Cramer Class II	9ug/kg/day
Cramer Class III	1.5ug/kg/day

Where the TTC is exceeded for a specific substance, justification for deeming it “safe” will be provided.

MoS OF SUBSTANCES ASSESSED IN THIS REPORT.

The MoS was calculated for each substance used in each of the formulations covered in this assessment; the MoS for each substance was >100; the assessment determined that each of the substances was satisfactorily safe when used as specified by each of the formulations detailed in this report. Any substance with a MoS of >1000 is considered safe and non-toxic.

PROHIBITED AND RESTRICTED SUBSTANCES, AND ALLERGENS:

There are no substances in the formulations of each of the products defined as prohibited by Annex VI of Regulation (EC) No. 1223/2009.

Any allergens present in the essential and/or fragrance oils used in any of the formulations that exceed 0.001% must be indicated on the labelling of the product(s). The manufacturer is responsible for calculating the allergens present and determining which – if any – must be included on the labelling.

H. INFORMATION ON THE COSMETIC PRODUCT(S).

There are no specific or medicinal claims made by the products. The product is intended for general cosmetic use by general consumers and does not contain any novel or previously unused cosmetic ingredients. All the ingredients used in the formulation for each of the products are widely used in cosmetic preparations and are generally considered safe for use in this type of cosmetic product.

	TOXICOLOGICA
INCI NAME	TOXICOLOGICAL PROFILE

ALOE BARBADENSIS LEAF EXTRACT	Composition and Physical and Chemical Properties Gjerstad (l969) described Aloe as the dried juice of the lowerportion of the leaves of any three geographical varieties of theAloe genus. The juice appears blackish-brown, opaque, andsmooth.Ghannam et al. (l986) described the solid residue ofAloebarbadensis(native to Mediterranean countries and the SaudiArabian peninsula) obtained by evaporating the sap drained fromthe cut leaves. This drained latex solidifies and turns brown onexposure to air. It contains anthraquinone glycosides, barbaloin,andβ-barbaloin, the hydrolysis of which yields aloe-emodin andd- arabinose.Natow (l986) stated that Aloe is the name given to the genusthat includes more than 300 plants, grown all over the world.This report considers ingredients from four species:andongen-sis, arborescens, barbadensis, andferox REPEAT DOSE TOXICITY Fogelman et al. (l992b) mixed acemannan in a predeter-mined quantity of feed to deliver doses of 0, l00, 400, or l500mg/kg/day for each purebred Beagle dog over a 90-day dos-ing period. The dogs were observed twice daily for clinicalsigns of toxicity. Detailed examinations were done prior to ini-tiation of dosing and at weeks 4, 5, 8, 9, l0, ll, l2, and l3.Body weights were recorded weekly. Ophthalmic examinationswere conducted prior to study initiation and at termination ofthe study. Serum chemistry, hematologic, and urinalysis datawere recorded at day 45 and at termination. The animals wereeuthanized at day 90 and subjected to a complete necropsy. There were no significant signs of systemic toxicity. Bodyweightsandfoodconsumptionwerecomparablebetweentreatedand nontreated dogs. Serum chemistry, hematology, and urinal-ysis data from the treated dogs were all within the normal limitsat all times evaluated. No significant gross or microscopic le-sions were attributed to the ingestion of acemannan. The NOELfor acemannan, orally administered to Beagle dogs, was at leastl500 mg/kg/day (estimated), which is equivalent to l,l70 mgacemannan/kg/day. In a six month study by these authors, acemannan was mixedin the basal diet of Sprague-Dawley (20 rats/sex/group) rats toprovide acemannan doses of 0, 200, 650, or 2000 mg/kg/day.Individual body weights were determined initially, weekly for15 weeks, biweekly thereafter, and at study termination. Foodconsumption was measured during the week prior to initiationand concurrently with body weights throughout the study. Twicedaily observations were made for mortality and clinical signs oftoxicity. Concurrent with the body weight data collection, de-tailed physical examinations were performed. Ophthalmic ex-aminations were performed initially and at study termination.At 1, 3, and 6 months, 10 rats/sex/group underwent hematology,serum chemistry, and urinalysis determinations. Complete grossnecropsy examinations were conducted on all animals that diedduring the study, 10 rats/sex/group at day 90, and all survivorsat 6 months. The l4-day NOEL (no observed effect level) foracemannan in the diet, in rats, was 50,000 ppm, equivalent to4068 mg acemannan/kg/day in male rats and 4570 mg aceman-nan/kg/day in female rats. CONSIDERED SAFE AS A COSMETIC INGREDIENT: https://journals.sagepub.com/doi/epdf/10.1080/109158107013511186
AQUA	MOLECULAR FORMULA: H2O CHEMICAL (IUPAC) NAME: Water CAS#: 7732-18-5 EC#: 231-791-2 FUNCTION: Solvent
	No toxicological significance.

BENZYL ALCOHOL	Single oral application of gavage doses to rats and observation for l4 days: LD50 = l620 mg/kg bw (Bayer AG l978); no indications of toxicity were observed at the lowest dose of 1045 mg/kg bw . Exposure of rats according to OECD TG 403 to single 4-hour aerosol concentrations up to 4178 mg/m³ air (maximum technically achievable conc., Bayer l990) or at the limit dose of 5400 mg/m³ (Elf Atochem SA, l993) and observation for l4 days: LC50 > 4178 mg/m³; no mortalities were observed and only minor symptoms. In a study for skin irritation/corrosion with rabbits according to OECD TG 404 benzyl alcohol was evaluated as not irritating to the skin (Bayer AG l990). Based on the results of two eye irritation studies according to OECD TG 405 it was concluded that benzyl alcohol has an irritant potential to the eye (Bayer l990, Elf Atochem l998). Based on acute and repeated inhalation studies (OECD TG 403 and 412, respectively) no potential for respiratory irritation was concluded. In a 13 week dose-finding study male and female rats received daily up to 800 mg/kg bw benzyl alcohol. The NOAEL was considered to be 400 mg/kg bw/daybased on signs of neurotoxicity, reduced body weight development and histopathological effects mainly in the brain at next higher dose (800 mg/kg bw/day)(NTP l989). This NOAEL was confirmed in a 2 year study (carcinogenicity study). In a 13 week dose-finding study male and female mice received daily up to 800 mg/kg bw benzyl alcohol. The NOEL was considered to be 200 mg/kg bw/day. At 400 mg/kg a slight decreased body weight gain was reported and at 800 mg/kg additionally staggering after dosing during the first and second weeks of the studies was observed. No compound-related histopathological effects were found in the mice study, indicating adaptive response to the compound and no adverse effect at 400 or 800 mg/kg. This NOEL was confirmed in a 2 year study (carcinogenicity study). In a subacute inhalation toxicity study according to OECD TG 412, male and female rats were exposed nose-only to benzyl alcohol at mean analytical exposure concentrations up to 1072 mg/m³ air for 6 hour/day, 5 day/week for 4 weeks. The NOAEL was concluded to be 1072 mg/m³ based based on the fact that the exposure was tolerated without adverse effects up to and including this test substance concentration (Roper 2010).	>100
CANNABIDIOL	Molecular Formula C2lH30O2 Molecular Weight 314.5 CBD has a chemical formula of C2lH30O2 and a molecular weight of 314.469 g/mol. Cannabidiol is a phytocannabinoid derived from Cannabis species, which is devoid of psychoactive activity, with analgesic, anti-inflammatory, antineoplastic and chemopreventive activities. Upon administration, cannabidiol (CBD) exerts its anti-proliferative, anti-angiogenic and pro- apoptotic activity through various mechanisms, which likely do not involve signaling by cannabinoid receptor l (CB1), CB2, or vanilloid receptor l. CBD stimulates endoplasmic reticulum (ER) stress and inhibits AKT/mTOR signaling, thereby activating autophagy and promoting apoptosis. In addition, CBD enhances the generation of reactive oxygen species (ROS), which further enhances apoptosis. This agent also upregulates the expression of intercellular adhesion molecule l (ICAM-l) and tissue inhibitor of matrix metalloproteinases-l (TIMPl) and decreases the expression of inhibitor of DNA binding l (ID-l). This inhibits cancer cell invasiveness and metastasis. CBD may also activate the transient receptor potential vanilloid type 2 (TRPV2), which may increase the uptake of various cytotoxic agents in cancer cells. The analgesic effect of CBD is mediated through the binding of this agent to and activation of CB1. The safety of cosmetic products in the UK is regulated by the EU Cosmetics Regulation 1223/2009 (“the Regulation”) as adopted into UK law2.	>100

Narcotic substances, as listed in Tables I and II of the Single Convention on Narcotic Drugs (UN Drug Control Conventions, 1972) are prohibited in cosmetic products via entry 306 of Annex II to the Regulation.

Cannabis and cannabis resin, cannabinol and cannabinol derivatives are Class B drugs under the Misuse of Drugs Act 1971. Any preparations or product containing the above substances are also controlled as Class B drugs.

CBD is not controlled under the Misuse of Drugs Act of 1971.

Once specific criteria are met (see Annex A), plant-derived and synthetic CBD are not controlled under the Single Convention on Narcotic Drugs and may therefore be used in finished cosmetic products.

Mouse study

GWTX1503, 13 week oral toxicity Mean alanine amino transaminase/alanine aminotransferase (ALT) levels were higher than controls during Week 7 and 13 in males given ≥ 150 mg/kg/day (by approximately 65% and 40%, respectively) and during Week 7

for females given 150 or 300 mg/kg/day (by 259% or 83%, respectively). Microscopic centrilobular hepatocyte hypertrophy in all animals given 300 mg/kg/day and in some animals given 100 or 150 mg/kg/day was associated with increased liver weight in all groups and macroscopic enlargement at ≥ 150 mg/kg/day. No observed adverse effect level (NOAEL) was 300 mg/kg/day CBD-OS, corresponding to the respective Week 13 maximum measured plasma concentration (Cmax) and area under the concentration-time curve calculated to the last observable concentration at time t (AUC(0-t)) values of 9810 ng/mL

and 44300 ng h/mL in males and 5770 ng/mL and 46400 ng h/mL in females.

39-Week Oral

(Gavage) Toxicity with 4-Week Recovery in Dogs (GWTX1413) Beagle dogs (4/sex/main groups) received CBD-OS at 0 (vehicle), 10, 50, or 100 mg/kg/day once daily for 39 weeks. Reversibility of changes was evaluated following a 4-week recovery phase (2/sex/control and high dose groups). In dogs, the target organ for toxicity was liver with hepatocyte hypertrophy,

macroscopic enlargement and increased liver weight. No increase in bilirubin, necrosis or significant inflammation and/or proliferation suggests that effects observed in rats and dogs might be reflections of adaptive changes due to microsomal hepatic induction. However, due to absence of hormonal examinations and some other effects of hormonal misbalance observed in the studies these effects need to be further substantiated via post-authorisation measure.

BioA not GLP CD-1 mice/12 NOAEL (mg/kg/ day): 300 mg/kg Liver centrilobular hypertrophy in some animals given 100 or 150 mg/kg/day and all animals given 300 mg/kg/day Liver centrilobular hyper-trophy at ≥ 50 mg/kg/day Doses ≥ 50 mg/kg/day

152 No adverse effects were apparent in rats treated with 50 mg/kg bw/day CBD. This would result in a potential HGBV of 50/10x10 = 0.5 mg/kg/bw per day which is equivalent to 35 mg/day in a 70 kg adult. 153 Very little data from this study is publicly available and it is was not conducted to Good Laboratory Practice (GLP) and so it is unclear what conclusions can be drawn. The FDA86 considered the study to be inadequate, stating that "…only the CBD Botanical Drug Substance (BDS) was administered in the diet, resulting in uncertain exposures, potential interactions with impurities, and excessive BW effects in the single species tested is also an important deficiency. This may at least partially be addressed by the mouse study that is currently underway. The toxicity evaluation of the parent compound can otherwise be considered adequate". No Special Protocol Assessment87 (SPA) was submitted for this study.

cONSIDERED SAFE FOR USE (FDA, FSA, SCCS)

https://www.accessdata.fda.gov/drugsatfda_docs/nda/2018/210365Orig1s000PharmR.pdf

CARBOMER	EC Number: 618-347-7 CAS Number: 9003-01-4 Molecular formula: Not suitable for this UVCB. The molecular formula of each component of the UVCB is given in the individual reference substances of the chemical composition. IUPAC Name: 2-Propenoic acid, homopolymer Information was obtained from read-across from supporting substance (acrylic acid) which is of moderate toxicity after a single ingestion and after short-term inhalation exposure. Acrylic acid is not toxic after short-term skin contact, when tested in non-corrosive concentrations. − Oral: LD50 = 1500 mg/kg or 146-1405 mg/kg bw (rat) depending on the concentration tested − Dermal: LD50 > 2000 mg/kg bw (rabbit, occlusive) − Inhalation: LC50 > 5.1 mg/L (rat, vapour saturated atmosphere) Sipomer B- CEA tested in vivo showed no skin irritation effects. There is no specific eye irritation study. Due to the presence of up to 20% acrylic acid in the UVCB, using a direct analogy, Sipomer B-CEA is considered as causing serious eye damage. Some positive test results were obtained with acrylic acid in Guinea pigs. The effects were attributed to the presence of the impurity alpha,beta- Diacryloxypropionic acid in the test substance. Based on the in vivo data on the analogue acrylic acid, the registered substance is considered not to bear a skin sensitization potential. Following repeated oral administration of the analogue acrylic acid in drinking water to Wistar rats at the dose levels of 0, 120, 800, 2000 or 5000 ppm (equivalent to 0, 6, 40, 100 or 200 mg/kg and 0, 10, 66, 150 or 375 mg/kg, for males and females respectively) for 12 months, the dose of 800 ppm in males (equivalent to 40 mg/kg) was identified as a NOAEL based on decreased water intake and body weight at higher dose levels. No target organs were identified. Based on 4 different Ames tests on its analogue acrylic acid up to concentrations ranging between 1000 and 5000 µg/plate with or without exogenous metabolic activation, the registered substance is considered to be devoid of mutagenic potential in bacterial systems. Acrylic acid did not induce gene mutations in CHO cells (HGPRT locus) in one study but was positive in four distinct mouse lymphoma assays and in two in vitro chromosomal aberration tests. In the mouse lymphoma assays small colonies were induced preferentially, thus the mutagenic potential of acrylic acid seems to be limited to clastogenicity.	>100
ETHYLHEXYLGLYCERIN	Ethylhexylglycerin is also named as 3-(2-Ethylhexoxy)propane-1,2-diol or octoxyglycerin. It is a glyceryl ether. It is used as a weak preservative, as skin conditioning agent with effective wetting ability. It is used with phenoxyethanol in cosmetics to obtain better protection against microbial growth. Chemical Properties Ethylhexylglycerin is a glycerol monoalkylether of defined structure and high purity,with a 2-ethylhexyl group bound to the primary hydroxyl function of the glycerol molecule. Due to the fact that it is a crystal-clear,colourless liquid with a slightly characteristic odour it is well suited for the use in cosmetic products. Although it is less soluble in water(<0.1% at 25°C),it is more easily soluble in most common cosmetic alcohols and glycols as well as oils.Ethylhexylglycerin is rather stable, e.g. against hydrolysis and elevated temperatures and compatible with cosmetic ingredients. CONSIDERED SAFE AS A COSMETIC INGREDIENT: https://www.cir-safety.org/sites/default/files/ethylh122011finalx.pdf	>100

	ACUTE TOXICITY Dose descriptor: LD50 Effect level: > 2 000 mg/kg bw NOAEL (ECHA) = 100mg/kg	

GLYCERIN	MOLECULAR FORMULA: C3H8O3 CHEMICAL (IUPAC) NAME: propane-l,2,3-triol (Glycerin / Glycerol) CAS#: 56-81-5 EC#: 200-289-5 FUNCTION: Humectant, Skin Conditioning, Skin controlling (reaction product of NaOH & Fatty acids) Glycerin (Glycerol) is a polyol (polyhydric alcohol) that functions as a humectant, crystallization modifier, and plasticizer. it is a bit- tersweet liquid which has a high solubility of 71 g/100 g of water at 25°c. it is 75% as sweet as sugar. it is a fair oil solvent and has a medium to high hygroscopicity. it is used to maintain a certain moisture content to prevent the drying-out of foods; at l0—l5% in raisins, it keeps them from drying out and prevents their moisture from migrating into cereal. it is used in confections to maintain the initial level of crystallization of the soft sugar. in reduced-fat frozen desserts, it helps prevent ice crystal formation. it also functions as a flavor solvent. applications include marshmallows, candy, and baked goods. CAS Number: 56-81-5 Molecular formula: C3H8O3 The acute oral LD50 was determined in three species, rat, mice and guinea pigs. In all three species the oral LD50 was >/= 11,500 mg/kg. The acute dermal toxicity of glycerin was examined in guinea pigs. The dermal LD50 was determined to be 45 ml/kg (56,750 mg/kg) in guinea pigs. In an inhalation study, rats were exposed to aerosol from test material at targeted concentrations of 1.0, 2.0, or 4.0 mg glycerol/L for 6 hours. The 4 h inhalation LC50 was determined to be above 5.85 mg/L in rats. A round-robin testing program was conducted in 14 laboratories. The dermal irritation potential was examined. Glycerin was considered to be non irritating to the skin in rabbit irritation studies in 14 testing laboratories. In another study with rabbits, glycerin was considered to be non-irritating also. Glycerol was applied to the skin of 33 humans for 24 hours on a semi-occluded patch and the response to the test material was observed. Under the conditions of the study, Glycerine USP (25% concentration) exhibited no clinical irritation when tested in humans. not sensitising, OECD 429: S.I. of l.l, 0.7 and 0.5 at 25%, 50% and l00% v/v not sensitising based on human data In the best available dietary study, groups of 22 rats (Long-Evans)/sex/treatment received 5, 10 and 20% glycerol (natural or synthetic) in their diet	>100

	(males 2000, 4000 and 8000 mg/kg bw; females 2500, 5000 and 10000 mg/kg bw) for 2 years. Although the results were not described in detail, based on this limited dietary study it can be concluded that no adverse effects were observed at up to 10,000 mg/kg bw. The effect of glycerine following administration for 90 days in a subchronic toxicity study was examined. Rats fed 5 or 20% glycerine in the diet for 90 days gained weight at a faster rate than control animals. There were no adverse treatment related effects noted in male or female rats fed 5% glycerine in the diet. In the male rats which received 20 percent glycerine, there was an increase in the final liver/body weight ratio and upon microscopic examination generalized cloudy swelling and hypertrophy of the parenchymal cells was observed. The only effect in the female rats on this level was some generalized cloudy selling upon microscopic examination of the liver. A 5% glycerol in the diet corresponded to 4580 and 6450 mg/kg/day for male and female rats, respectively, after 4 weeks and a 20% glycerol in the diet corresponded to 18,750 and 25,800 mg/kg/day for male and female rats, respectively, after 4 weeks. A number of other studies have been incorporated in the dossier. These studies are considered less reliable indicators of the systemic effects of glycerol following repeated administration, mainly because of limited toxicity assessments and/or deficient experimental design. The effects they do report are consistent with those observed in the key studies and as such they may contribute to the overall assessment of toxicity of glycerol. The acute oral LD50 was determined in three species, rat, mice and guinea pigs. In all three species the oral LD50 was >/= 11,500 mg/kg. The acute dermal toxicity of glycerin was examined in guinea pigs. The dermal LD50 was determined to be 45 ml/kg (56,750 mg/kg) in guinea pigs. In an inhalation study, rats were exposed to aerosol from test material at targeted concentrations of 1.0, 2.0, or 4.0 mg glycerol/L for 6 hours. The 4 h inhalation LC50 was determined to be above 5.85 mg/L in rats. A round-robin testing program was conducted in 14 laboratories. The dermal irritation potential was examined. Glycerin was considered to be non irritating to the skin in rabbit irritation studies in 14 testing laboratories. In another study with rabbits, glycerin was considered to be non-irritating also. Glycerol was applied to the skin of 33 humans for 24 hours on a semi-occluded patch and the response to the test material was observed. Under the conditions of the study, Glycerine USP (25% concentration) exhibited no clinical irritation when tested in humans. not sensitising, OECD 429: S.I. of 1.1, 0.7 and 0.5 at 25%, 50% and 100% v/v not sensitising based on human data In the best available dietary study, groups of 22 rats (Long-Evans)/sex/treatment received 5, 10 and 20% glycerol (natural or synthetic) in their diet (males 2000, 4000 and 8000 mg/kg bw; females 2500, 5000 and 10000 mg/kg bw) for 2 years. Although the results were not described in detail, based on this limited dietary study it can be concluded that no adverse effects were observed at up to 10,000 mg/kg bw. A number of other studies have been incorporated in the dossier. These studies are considered less reliable indicators of the systemic effects of glycerol following repeated administration, mainly because of limited toxicity assessments and/or deficient experimental design. The effects they do report are consistent with those observed in the key studies and as such they may contribute to the overall assessment of toxicity of glycerol.	
PHENOXYETHANOL	Phenoxyethanol is an organic chemical compound, a glycol ether often used in dermatological products such as skin creams and sunscreen. It is	>100

	a colorless oily liquid. It is a bactericide (usually used in conjunction with quaternary ammonium compounds). Phenoxyethanol is used in many	
	applications such as cosmetics, vaccines and pharmaceuticals as a preservative. Phenoxyethanol is a tried-and-tested preservative, which is welltolerated by the skin and has a low allergy risk. It can be used over a wide pH range. This means that other preservatives can lose their effectiveness if the product is not within the right pH range. It does not smell unpleasant or change the color of the product, which can be the case when using natural antimicrobial substances. Phenoxyethanol is a colorless, slightly viscous liquid with a faint pleasant odor and burning taste. CONSIDERED SAFE AS A COSMETIC INGREDIENT: https://journals.sagepub.com/doi/pdf/10.3109/10958789737X Molecular formula: C8H10O2 IUPAC Name: 2-phenoxyethan-1-ol 2-Phenoxyethanol displayed low acute oral toxicity in rats. 2-Phenoxyethanol displayed very low acute dermal toxicity tested in rats and rabbits. 2-Phenoxyethanol displayed no effects following inhalation exposure in rats. 2-Phenoxyethanol is not irritating to rabbit skin, but irritating to the eyes. 2-Phenoxyethanol is not sensitising to guinea pig skin. Several repeated oral dose toxicity studies were available. The benchmark dose method was used to derive a BMDL10. The most critical effect was determined to be the renal hyperplasia in male rats. Combining the subchronic and chronic studies in rats a BMDL10 of 369 mg/kg bw/day has been derived. In a 90-day repeated-dose dermal toxicity study in white rabbits toxicologically non relevant effects were observed. Therefore the highest dose tested (500 mg/kg bw/day) was designated as the NOAEL for systemic toxicity. In a 14-day inhalation study with rats pathological examinations revealed no treatment-related changes in either males or females. Morphological changes indicating irritation were found in nasal cavity, larynx and lung of male and female mid- and high-concentration animals. A NOAEC of 48.2mg/m³ was determined. In a multi-generation study, fertility was minimally decreased at a dose that caused neonatal toxicity. The NOAEL for parental and neonatal toxicity was 375 mg 2-phenoxyethanol/kg bw/day.	

POLYSORBATE-20	Tween 20, whose common commercial names includes Alkest TW 20 and Polysorbate 20, is a mild nonionic surfactant formed by the ethoxylation of sorbitan before the addition of lauric acid which is a medium-chain fatty acid found mainly in coconut oil. It is allowed to be used as the emulsifier, detergent, dispersant, solvent and stabilizer, etc. in a number of fields such as pharmaceutical, chemical, food, textile and other industries due to its stability and relative non-toxicity. Tween 20 is widely applied in biological techniques and sciences, which can be added to buffers and reagents for immunohistochemistry, such as Western blots and ELISAs, helping to prevent non-specific antibody binding, decrease background staining and enhance reagent spreading. Besides, Tween 20 also has applications in food production as a common food grade additive which are found in many consumables on the market today. It can also be used as a wetting agent in flavored mouth drops such as Ice Drops, in oral or non-gastrointestinal suspensions and in rubber balers in the elastomer industry. CONSIDERED SAFE AS A COSMETIC INGREDIENT: https://journals.sagepub.com/doi/10.3109/10958840902272 Acute toxicity:	>100

Oral: based on a weight of evidence approach, all available acute oral toxicity studies on the test substance resulted in acute oral LD50 in rats greater than 2000 mg/kg bw.

Inhalation (OECD 403), rat, 4 hour exposure: LD50 > 5.1 mg/L Dermal: no study available

skin irritation (OECD 404): not irritating

eye irritation: based on a weight of evidence approach, all available irritation/corrosion studies for the test substance revealed no eye irritating effects.

Oral: based on a weight of evidence approach, all oral repeated dose toxicity studies for the test substance revealed no adverse effects. Repeated oral dose toxitcity

A weight of evidence approach based on data for sorbitan monolaurate, ethoxylated (<2.5 EO, Polysorbate 21, CAS 9005-64-5) together with data on sorbitan monolaurate, ethoxylated (20 EO, Polysorbate 20, CAS 9005-64-5) was performed since data on oral repeated dose toxicity is limited for Polysorbate 21. Repeated dose toxicity after oral exposure to Polysorbate 21 was investigated in a chronic life-span feeding study (104 wks) with rats at a concentration of 2% in diet, corresponding to 2000 mg/kg bw/d (calculation based on the assumption of an average body weight of 200 g and an average food consumption of 20 g/animal) (Croda 1949). In the test group, 30 male animals were included whereas 50 animals served as control. Mortality, clinical signs of toxicity and body weight development of the experimental group were comparable to controls. Haematology, clinical chemistry, gross pathology and histopathology did not reveal differences between test and control animals. Therefore, the NOAEL for male rats was determined to be >2000 mg/kg bw/day. In a second study, oral administration of Polysorbate 20 via food was investigated in a sub- chronic study with 25% test substance in 10 male rats, corresponding to 25000 mg/kg bw/day (calculated on the assumption of an average body weight of 200 g and an average food consumption of 20 g/animal) (Eagle 1956). Diarrhea was observed in all treated animals. One animal died (group not specified). No effects on body weight development were observed in the experimental group. At gross pathology, unusual high incidences of renal hypertrophy, renal/urinary bladder calculi, ulceration of the tail, enlargement of caecum and spleen, small testes and ulceration in the stomach were observed in the test substance treated animals. Histopathology further revealed microscopic alterations in kidney, testes, lymphoid tissue, liver, intestinal tract and coronary tissues in the treated animals. With regard to these results, a LOAEL of 25000 mg/kg bw/day was set for male rats. In another study, polysorbate 20 was orally administered via food to male and female rats (14 males and 16 females/group) daily for 70 days (Harris 1951). At the beginning, 5% test substance was administered and the dose was increased to 25% during the first 10 days, corresponding to 5000 (5%) and 25000 (25%) mg/kg bw/day, based on the assumption of an average body weight of 200 g and an average food consumption of 20 g/animal. 5 experimental animals died during the study. Test substance treated animals developed diarrhea during the first week which later became so severe that the tail became inflamed. Body weight gain was reduced to 67% of controls. In relation, food consumption and food efficiency was less when compared to controls. No effects on organ weights were observed. At gross pathology, a majority of rats fed the test substance revealed distended caeca filled with liquid and gas. At histopathology, effects on the gastrointestinal tract, kidneys and spleens, lungs, testes and ovaries were observed. Therefore, a LOAEL of 25000 mg/kg bw/day was determined for both genders. In addition, a study performed with polysorbate 20 in hamsters is available (Eagle 1956). Animals (10/group) were treated with 5, 10 and 15% test substance concentrations for up to 39 weeks by gavage (corresponding to 3750, 7500, 11250 mg/kg bw/day; calculated on the assumption of an average body weight of 200 g and an average food consumption of 15 g/animal). Mortalities in the experimental groups were observed as follows: 1/10, 2/10, 1/10 for the 3750, 7500, 11250 mg/kg bw/day dose groups. Most of the experimental animals showed diarrhea. At gross pathology small testes, large/distended caeca as well as very pale and distorted/granular kidneys suggestive of nephrosclerosis were dose-dependently observed in the experimental animals. At histopathology, hemosiderosis and cirrhosis in the liver as well as obstructive nephropathy, pyelonephritis and atrophy in the kidney was observed from the 3750 mg/kg bw/day dose level onwards. Therefore, a LOAEL of 3750 mg/kg bw/day was determined for hamsters from the results of this study.

	Justification for selection of repeated dose toxicity via oral route - systemic effects endpoint: Hazard assessment is based on the weight of evidence from all available studies.	
SODIUM HYDROXIDE	No reliable studies are available for acute toxicity to NaOH. According to the REACH Regulation, acute toxicity testing does not generally need to be conducted if the substance is classified as corrosive to the skin (column 2 adaptation, Annex VIII). NaOH is a corrosive substance and for this reason there is no need for further acute toxicity testing (EU RAR, 2007; section 4.1.2.2.3, page 65). The introductory sections to Annexes VII-X point at a specific adaptation to the standard information requirements as in vivo testing shall be avoided with corrosive substances at concentration/dose levels causing corrosivity. However, NaOH is not expected to be systemically available in the body under normal handling and use conditions and therefore systemic effects of NaOH after repeated exposure are not expected to occur (EU RAR of sodium hydroxide (2007); section 4.1.3.1.4, page 76).	>100

There are no substances contained within the formulation considered to be acutely toxic (either via dermal and/or oral exposure). There are no know dermal or ocular irritants or sensitisers. There are no phototoxic compounds. There are no known CMR compounds.

[1]: Toxicological risk is calculated using a number of parameters and is determined either by using published, peer-reviewed studies or determined computationally. The TTC values, presence of Cramer Compounds and the CMR activity of the compounds are assessed to assign a "toxicological risk category" to each component of the product(s):

1) *Low/limited toxicological significance: edible and inert substances with a NOAEL value of >1000mg/kg/day (or with no NOAEL value determined due to limited toxicological concern). Includes Cramer Class I compounds, no structural alerts and no CMR activity.*

2) *Limited toxicological significance: Functional components with a NOAEL of 100–500mg/kg/day. Cramer classes I and II, with limited structural alerts. No determined CMR activity.*

3) *Moderate toxicological significance: Functional and active components with a NOAEL of 50–100mg/kg/day. Cramer classes I and II with no structural alerts. No CMR activity at the levels used in the formulation.*

4) High toxicological concern: components with NOAEL of <50mg/kg/day. Cramer class II and III compounds and compounds with known or potential CMR activity.

REPORT PART B – *BODY BUTTER*

RESPONSIBLE PERSON DETAILS:

MELOVIBES LTD

Melovibes Ltd

2, Eagle Road, Eglwys Brewis, Barry. Vale of Glamorgan. CF62 4NR

I. ASSESSMENT CONCLUSIONS

Each of the products assessed by this report (specified in Part A) have been deemed safe for the prescribed use (**as a body butter**). These products satisfy the requirements as specified in Regulation (EC) No. 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products as amended by the Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019.

J. LABELLED WARNINGS AND INSTRUCTIONS OF USE

No specific requirements for product labelling (other than as described in the next section). Labelling must comply with Regulation (EC) No. 1223/2009 as amended. It is recommended that general safety guidelines are included, e.g., avoid contact with the eyes, if irritation occurs discontinue use, do not use on broken or irritated skin etc.

ALLERGENS – LABELLING DECLARATION

If any of the 26 allergens specified in the EC Directive 2003/15/EC are present in a leave on product (as is the case for these products) in a concentration of 0.001% or greater, then they must be specified on the product label.

VARIANT 1 ALLERGENS: N/A

VARIANT 2 ALLERGENS: N/A

K. REASONING

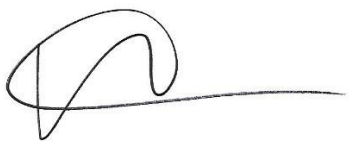
All available data for each component were reviewed for an assessment to be made. Minimally, the following criteria were considered for each product in this assessment:

- The quantitative and qualitative composition
- Physical/chemical characteristics and stability of substances
- Microbiological quality
- Impurities, trace materials and packaging used
- The normal and reasonably foreseeable use of the product(s)
- Exposure to the product(s) (local and systemic)
- Exposure to the substances (local and systemic)
- Toxicological profile of the substances – including MoS and NOAEL values
- Undesirable and serious undesirable effects
- Any other information relevant to the product

The NOAEL and MoS were calculated using published, peer-reviewed studies of oral, dermal, systemic etc. toxicity of each of the ingredients included in the formulation(s). Where no peer reviewed data were available, suitable cross-over data were obtained. Various sources were used to obtain the required data, including PubMed, COSMO database, CIR and SCSS etc. Full details of the sources used can be provided upon request.

L. ASSESSORS CREDENTIALS AND APPROVAL OF PART B

This product meets the requirements of Regulation (EC) No. 1223/2009 of the European Parliament and of the Council of 30 November 2009 and SCHEDULE 34 OF THE PRODUCT SAFETY AND METROLOGY ETC. (AMENDMENT ETC.) (EU EXIT) REGULATIONS 2019 and is approved.



Michael Ford, **BSc (Hons), MRes, AMRSB**

NAME: Michael Ford, MAF Cosmetic Consultants QUALIFICATIONS: BSc (Hons) Biochemistry, MRes Biochemistry, AMRSB ADDRESS: 18 Campion Close, Newport, NP20 5DR

DATE: 17/10/2023

3. Method of manufacture

Mixing machine. Hand blended and poured.

4. Evidence of compliance with Good Manufacturing Practices (GMP)

All ingredients are sourced from reputable UK suppliers with relevant MSDS and lab reports.

Best practice is followed in terms of hygiene, storage, and working environment.

5. Proof of the effect claimed

No claims made.

6. Data on Animal Testing

No testing on animals

7. Responsibility/Traceability

Responsible person

Melovibes Ltd

Manufacturer

Melovibes Ltd

Person responsible for packaging

Melovibes Ltd

Technical assessor

NAME: Michael Ford, MAF Cosmetic Consultants QUALIFICATIONS: BSc (Hons) Biochemistry, MRes Biochemistry, AMRSB ADDRESS: 18 Campion Close, Newport, NP20 5DR

8. Labeling

Compliant with EU guidelines.

Warnings: For external use only. Avoid contact with eyes. Keep out of the reach of children. Do not store in direct sunlight.

9. Data on serious undesirable effects

None declared at the time of preparation of this document.

APPENDIX

1) Handling and Storage
No special handling techniques required.
Keep out of reach of children. Store in a cool dry place. Keep from extreme heat, cold & sunlight.

2) Exposure controls and personal protection
No special personal protective equipment required.

3) Stability & Reactivity
The product is stable non-reactive. Avoid strong oxidising agents.

4) Toxicological Information
No acute or chronic toxic effects when used as directed.

5) Ecological information
No ecological hazards are associated with this product. It is biodegradable.

6) Disposal considerations
Dispose of product according to local and national regulations.

7) Transport information
Non Hazardous / Non-flammable. No shipping restrictions

8) Declaration of Allergens
The customer should satisfy themselves that the product is suitable for the intended purpose, and that a suitable and sufficient assessment of any risks created by any activity using this product is undertaken before use. This information is based upon our knowledge of the product at the time of publication. The data is given in good faith and should be viewed as guidance only. This product sheet cannot cover all possible situations which the user may experience. We do not assume any responsibility and expressly disclaim any liability for any use of this product.

9) Other Information

This PIF Summary does not constitute a legal document. Customers who retail Melovibes products under their own label are responsible for ensuring that their packaging and labels are compliant with the relevant legislation in the jurisdiction of sale.
Any customers who modify or add to our standard products are responsible for ensuring their product complies with legislation requirements in their jurisdiction of sale and Melovibes Ltd accept no liability. Any product marketed under private label must be registered with the OPSS and have a responsible person and registered address assigned to the brand that the product is being traded under.
To the best of our knowledge, the information contained in this document is correct.