ON SENSE AND NONSENSE IN COSMETICS

A SOBERING REPORT

What brings the skin alive

Normally the skin does not need creams. Formerly one anointed oneself with sebum and oil.

Beef suet, which is broadly similar to skin fat, is eminently suitable for skin care. Sebum has no odour, it is only too cheap.

Many people only value something according to its price, and to these people modern chemistry can offer all sorts of things which are not good, but expensive.

Lanolin, plant oil, beeswax and many other substances are praised in cosmetics because of their supposed similarity to natural skin fat.

However skin fat consists of one third free fatty acids, a further third of fat and the rest is divided between cholesterol and its esters, wax hydrocarbons and steroids.

The skin does not need creams. It can be supplied with all its needs from within. With our modern compulsion to wash we are however robbing the skin of much of this, and placing it under additional strain.

Creams can be useful here and provide a balance, but they can also accentuate the damaging external influences. The question is, how do we recognise and select what is good for our skin.

The skin is our largest organ. With its specific protein layers and cell bands it forms a barrier against its environment. It allows what is desirable to pass and blocks the harmful, if it can recognise what this is.

To do this it requires a measured balance of fats and water. As well as its own substances the skin requires fats (lipids) and water.

In cosmetics there is a preference for speaking about moisture. Moisturising cream sounds better than water cream.

In both main cosmetic components, oil and water, useful and harmful substitutes may be contained for application.

Among the technically more important belong emulsifiers, which mainly first make oil and water able to mix with one another.

Emulsifiers, if badly formulated, may make the water abrasive, similar to what people say about sausage, that they make the water firm.

The composition of creams

The most important component of creams is water, jokingly referred to in cosmetics as "profitin"

Water is cheap, makes the cream easily spreadable and through being thinned ensures that not too much oil is left on the skin after application. If we were to rub as much cream on the skin as we are accustomed to doing with a normal water retaining one, the distressing result would be a long lasting greasy film.

Water does however display one deciding weakness in creams:

- it makes decomposition by microbes possible.

All life needs water , even fungi and bacteria in a cream. The more of it there is in a cream, the better they grow.

But not only living germs can damage the cream, even dead germs or parts of them , the enzymes.

These can generate bio-chemical transformation processes, which can diminish the properties of a cream.

Accordingly the preservation of a water-based cream plays a decisive role.

The previously freely used materials, formaldehyde and chloracetic acid, worked - technically speaking - in an ideal way against all sorts of germs to the same degree, even against spores. Even isolated enzymes were inactivated by this wonder product.

The fact that this preserver goes on reacting just as vigorously on and in the skin, is of no importance technically speaking.

All that is important is that the cream pot always supplies a homogeneous cream, irrespective of how dirty the finger might be, which rests in it, and leaves behind germs on the surface of the cream.

Anyone who wants a cream in the jar at a cheap price only leaves the manufacturer with a small choice in selecting preservatives.

Creams can also be produced free of water, and then needed no preservatives. This could be linked with only slight expenses.

With creams with little water mild bacteriostatic substances can ensure long life.

The moisture which the skin needs is not water from the cream. The skin draws the requisite amount of water from the deeper skin layers, not from the cream jar.

Fats:

The fat phase represents the other main components of creams. It consists of thin flowing oils which may contain hard fats, wax and oils. Hard fats do not lend themselves to being spread directly over the skin, they must be mixed.

These lipids smooth the surface of the skin, make it supple and prevent the penetration of dirt into the upper skin layers.

They may be kind to skin, but also cause a strain, or at least when they lay a thick carpet of oil on the skin.

Catalysts:

Oil and water are not soluble in one another.

In order to maintain a sufficiently stable mixture of the phases, distributed in the finest droplets, emulsifiers are required as catalysts.

These are various sorts of substances which have in common that fact that they display water-like as well as oil-like qualities. With their many-faceted solvency capability they bridge the repelling qualities of oil and water.

Next to the pure emulsifiers there are also catalystic emulsifiers and solutizers.

Catalytic emulsifiers make an emulsion more stable, without themselves having any particular emulsifying properties.

Solutizers are substances which form a clear solution, perfume oil in eau de toilette for example.

All these chemical mediators belong to the large family of tensids: they release the surface tension of water. They make water more "fluid".

Creams can also be manufactured without emulsifiers and then partly have exceptional properties. Their unreliable stability, for example, makes them unsuitable for commercial products.

There are natural emulsifiers , such as the unjustly disreputable cholesterol, both identical to nature and artificial. With all of them it must be proved individually whether they are useful, digestible, tolerable, or harmful.

Active agents:

There is no agent in cosmetics which is not an active agent.

Even pure water has the effect of soaking the skin and displacing the natural moisture retaining factor in the surface of the skin.

Cosmetic agents can effectively protect the skin and keep it healthy.

The frequently voiced desire for cosmetics free from active agents is a cliché. There are no cosmetics free from active ingredients. The most practicable request is for cosmetics without medicinal active ingredients.

Of course a cream should not contain any

hormones or carcinogenic cytotoxins.

Unfortunately, the active ingredient concept, – in common with much in pharmacy – is also very shifting. What constitutes an active ingredient rests partly with the power of the medicine manufacturer to define it.

Until 1987 in West Germany medicines could contain, as preservatives, PHB esters, without this having to be indicated, even on products for internal use.

PHB esters also called parabenes are the most frequently used preservatives. Many people have an allergic reaction to them. Accordingly, it is very important for these afflicted "para" allergy sufferers to know in which substances these PHB esters are contained.

Medicines available only on prescription should neither appear in food or in cosmetics. Unfortunately this is not the case, not even poisons are forbidden (lead, selenium, nitrosamine).

"Active agents" such as polyglycolether or fatty acid amide certainly do not belong in a cream.

In this it is irrelevant whether the materials concerned are permitted as medical active agents or not. If properties which put a strain on the organism are predominant then they do not belong in cosmetics.

If the useful qualities are predominant then such "active agents" can also be included in the cream.

There is no sensible objection to a marigold cream , honey or lactic acid.

Active agents are used either in the oil or in the water phase. These are the oil-soluble vitamins A and E, as well as provitamin A (carotin), the unsaturated fatty acids, and the higher fatty alcohols, lanolin, phosphoric acid derivatives such as lecithin, beeswax.

The water soluble active agents are honey, plant extracts, organic acids, amino acids, C and B vitamins.

Types of emulsifier

A good cream is able to combine the opposing properties of the individual components into a unified structure.

Since the components are not soluble in one another, they are present together as tiny droplets. With simple emulsifiers these can even be recognised under the microscope.

At first glance it is not possible to distinguish whether the droplets are linked to the half made of oil or to the other half, of water-binding content.

A small trick : we add to the emulsion a trace of a water-soluble colorant. Two things are possible: either nothing visible or that the microscopic image is coloured by the colouring, until now an uncoloured droplet.

In the latter case, we see that the colour shows the structure of the cream: the oil balls are not coloured by the colouring. We see oil swimming in the water. Accordingly the type of emulsion, in which the fats phase is emulsified in the water phase, is called an O/W emulsion.

Nevertheless the opposite case is shown if we take an oil soluble colouring. Then we see water droplets in the oil phase , we speak of a W/O emulsion.

We could just as well have measured how the cream conducts an electric current in defining the emulsion type: an O/W emulsion conducts and W/O cream obstructs the current.

Since however emulsions of an accentuated type like O/W or W/O always have certain disadvantages, people could happily produce mixer emulsions for creams, in which combinations of both types of emulsion were used.

Sometimes W/O/W or O/W/O emulsions were manufactured.

Whether the cream is of one type or the other depends on the distribution of the phases.

So in manufacture an O/W cream forms at first an unstable W/O emulsion, if the water is poured into the warm oil. From a certain concentration onwards, the emulsion type suddenly changes about, and for the most part this is easily recognisable in the modified "stirability".

The opposite is valid here too: if we wear an O/W emulsion next to the skin, the water evaporates to a great extent and a W/O cream is left.

On top of this moisturising creams contain glycerine - a natural alcohol from fat processing, which has a strong dehydrating effect in water-free form. Glycerine is only present in tiny quantities in creams however, and then has the exactly opposite effect: it retains water on the skin.

Creams of the O/W type can be applied easily. They can be washed off of clothes and skin easily with water. They dry out slightly on the surface in jars, they spoil fairly easily. They contain 60 to 90 per cent water and leave the skin looking less greasy than other creams.

Soap-based creams (with the embellished name stearate creams) are absorbed into the skin very quickly: they lend a characteristic feeling of firmness and have little or no shine.

Stearate creams are thus technically speaking, because of their "barrier effect", the ideal foundation for make up.

Manufactures are happy to use detergents too in O/W creams as emulsifiers, for example sodium lauryl sulphate NLS. It is not always easy to recognise this from the formula.

These creams are sometimes described as lanette creams. They are also stable in slightly acid medium, whereas stearate creams decompose.

NLS simplifies the manufacture of creams and lends it stability even for the tropics.

The damaging effects of sodium lauryl sulphates are so significant that one can attribute a large proportion of cell damage to NLS.

Although the damaging properties of NLS are widely acknowledged, it is still used in a significant number of creams lotions, shampoos, shower products tooth pastes, etc. not least because it is cheap to produce from coconut oil.

It can be obtained in a pure crystalline form, which means that it can be stored as a powder without danger of deterioration: it can be measured off without problems and is easily soluble in water.

It is the only raw washing agent which does not smell obtrusively bitter. Ether sulphate and other tensids (cleaning agents) smell bitter, are scratchy and unbearably soapy.

The following reasons support the case against using NLS:

1. NLS has a putrefactive effect:

It reduces the healthy and necessary germs on the skin, or in the case of toothpaste in the taste buds, and encourages the putrefactive agents and fungi which carry illness.

2. This effect is long term

NLS sticks firmly to the surface of the skin. Large amounts of NLS are placed next to the skin. In washing trials on the skin of rats it was shown that NLS became firmly attached to the skin and could not be washed off. Already almost 20 per cent of the NLS worn on normal back skin is stuck fast.

3. NLS kills the higher living cells:

This gives putrefying creams a nourishment threshold on dead organic material and once they have a foothold they make a good job - or rather a bad one for the health of skin and teeth.

4. NLS makes the skin swell up:

NLS is the strongest skin swelling tensid of the important tensids. It virtually lets the skin swell by 300 per cent. This weakens the structure of the skin to an equal degree. The extreme effect of NLS is used as a standard to measure the comparative mildness of other tensids.

Albumen- fatty acid- condensation products, the very mild and biologically considerably less dubious tensid, make the skin swell under the same conditions by about 20 per cent.

Non-ionic amino oxide tensids swell the skin by up to 20 per cent.

Mixing NLS with tensides which reduce swelling does indeed clearly reduce the skin swelling, but the biological effects of the individual tensid remain unaffected.

5. NLS causes allergies:

NLS interacts with proteins (egg white). Accordingly it does not penetrate as far into the tissue. The outer skin is moreover protected by a whole battery of varying skin layers, but quantities of NLS penetrate right through the skin into the inner body.

That also explains why many people have an allergic reaction to NLS. However the majority are not aware of this connection.

Who already realises that the irritating spots forming on the thighs in the afternoons are a result of the morning shower, hairwash, tooth cleaning or face wash?

This finding in people has been proved using test tube trials on living film-like cultured fat cells.

Fat cells are storage cells which, when irritated , burst and release histamine, causing swelling and reddening of the skin.

Fat cells are a biological safety device. When dangerous irritation occurs they start to break up, like a biological predetermined breaking point, whereas life supporting cells such as macrophages (that is cells which eat up foreign protein like bacteria and viruses in the body), lymphocytes and granulocytes still remain functional.

The free histamine in the cultured fat cells is then, to use a transmission phrase, an unsupportably loud alarm siren.

The concentration of NLS, at which all fat cells burst releasing histamines are released, is about 1000 times smaller than would normally be found in toothpaste.

NLS binds particularly strongly to certain enzymes. These are then robbed of their capability of carrying out specific biochemical reactions in the cell.

When this occurs the damage caused by NLS is about 10 times greater than that of the biologically active disinfectant Quat.

These also deactivate enzymes but in this there is at least the possibility that the enzymes blocked by the Quat can regenerate, and recover if the concentration of Quat was not too high.

Under the influence of NLS there is no such regeneration - NLS kills enzymes!

6. NLS destroys skin and hair!:

Even the horn material from which hair and nails are made, keratin, loses essential natural properties through NLS.

NLS destroys the upper layers of skin, and this is shown in the fact that a noticeable amount of amino acid is washed off of the skin after treatment with NLS.

The release of amino acids as a result of NLS treatment on the skin, leading to the decomposition of cells, already attributes an amount to NLS corresponding to 250 times the thinning of toothpaste. (As a comparison: soaps show similar effects only at a 50 times higher concentration).

Fibroplasts, a specific type of cell, adjust their growth to 50% if NLS effects them in a quantity which is one thousandth of the concentration in which NLS usually appears in toothpaste.

Since, when cleaning teeth, the paste is certainly not thinned 1200 fold , but only much less by saliva, there is more than a possibility of a clear removal of the ability of the cells in the mucous membrane of the mouth to remain alive.

The red blood corpuscles (erythrocytes) already show pronounced modifications at 0.0075 % NLS in the majority of erythrocyte shadows.

At 0.05 per cent there is a complete disintegration of all red blood corpuscles.

7. NLS poisons genes:

NLS changes the hereditary information of micro organisms. This can, but must not, occur in the same way with higher organisms.

The suspicion is however well-founded because of the damaging effect with organisms and even people.

Mutation does not mean cancer. But cancer is the result of mutation. Mutation by chemical influences is a health risk which should be taken very seriously: it is the obvious proof of a poisoning effect on

DNA - hereditary information.

That which poisons is called toxic. Substances which poison genes in a controlled manner are called "gentoxic". **This has already been proved in several cases with NLS!**

8. NLS is a primary inflammatory agent.

NLS is an emulsifier which can be found in many cosmetics, toothpastes and pharmaceutical carriers. Like many other soaps it is also a primary inflammatory agent: as such it is effective in concentrations of 1 per cent.

On the American register of poisons, which is issued by the US Health Authorities, NLS is listed under no WT 1 050 000 as a primary irritant, meaning that it directly causes itching and this is the same as saying that NLS is a primary inflammatory agent.

As has already been written above, NLS, because of its extremely irritant effect, makes the skin swell by up to three times.

The strong and lasting effect has a bad significance for cosmetics.

Many buyers and even the "Warentest-Foundation" itself , which really should know better, puts much store by skin smoothing effect when assessing a cream.

Of course swollen skin is smoother than skin in its normal state.

Young skin is firm and smooth, older skin is less rich in water and this thinner and has more folds - like an apple with a shrivelled skin, when the juice dries up.

The emulsifier NLS irritates the skin exclusively: the result is an inflammatory collection of water. Perhaps the skin looks good but it is sick!

NLS is happily combined with polyglycol ethers in O/W creams, these are often used alone too.

These "wonderful" test tube substances are available in solid or liquid form. Mostly they contain one natural component to which the polyether chain is attached.

These emulsifiers are finely adjustable for every purpose. The right selection of glycol ethers guarantees an absolutely stable cream. The quantities used together are astonishingly small, the aimed-for durability of the cream is astonishingly high.

But these glycolethers are something like Trojan horses. They penetrate into the skin taking other materials with them, which would not have penetrated the skin without these emulsifiers.

The glycol ethers are partly more toxic to living cells than NLS and have nerve crippling properties.

The fact that they always occur in extensive mixtures, which preclude any meaningful analysis, is a practical impediment to their predictability. Mostly only group characteristics of these multiple ingredient mixtures are determined.

It is possible that many an unclarified allergic appearance could be traced back to it. Polyglycols and natural cosmetics are in every case mutually exclusive.

Back in 1885, the chemist Berthelot was producing non-ionic emulsifiers made from sugar and stearic acid, which were biologically defensible. They are harmless from a health point of view , but are hardly ever used.

The mode of a cream is dependent on the viscosity of the watery phase. Viscosity describes the flowing qualities of a substance: water is a low viscosity fluid. Cream is of a high viscosity.

It does not matter whether it is beeswax in the oil droplets or thin oil. Therefore one can add thickening mucus to the O/W creams. Many natural cream forms are available for this (alginic acid, tragacanth, starch etc.) and many modified celluloses, mineralised bentonite etc.

These sources are harmless to the skin. The amount of them used in creams is very limited, since they easily from a film on the skin, which can however be washed off after soaking in oil and water.

The water soluble but not natural acrylic acids show no disruptive application qualities of this sort. They do not dissolve easily in water, but through neutralisation they become instantaneously crystal clear and astoun-

dingly firm. With these it is possible to produce creams with high quality oils without heating.

According to company literature from B F Goodrich, these various acrylic gel forms contain up to 2000 ppm benzene.

Benzene is a substance which is forbidden for use in cosmetics under EC law. It is clearly carcinogenic. Everyone in the business knows this. This is why competitors exalt their acrylates as "benzene- and toluene- free", at least free below the test level.

Mixed and especially O/W emulsions will continue to displace the classical W/O type emulsion.

In the more recent O/W emulsion active agents are sensibly included in the oil and water phases, in the W/O type only in the oil phase.

Which advantages have the old W/O formulae retained?

Earlier they were narrowly confined to the area of pharmacology. Even in the year 100 Claudius Galenus reported: " A portion of purified beeswax was carefully melted in a porcelain dish together with 3 to 4 parts olive oil, in which rose petals had been crushed. After cooling the mixture water was mixed in, sufficient to bind the quantity."

This formula is the first written for **cold cream**, called cold because of its cooling effect. When it was rubbed into the skin only the loosely bound water was discharged and quickly evaporated. In Italy or Greece this effect was certainly a pleasant one, our climate makes other demands. Such a cream would certainly be much too firm, too unspreadable.

The W/O cream is relatively free of bacterial build up. The water is surrounded in the tiniest proportions by a firm wax/oil structure. If germs penetrate, they are only able to attack the microscopic water part, which is what they are in. The spreading throughout the whole cream is prevented by the firm fat matrix.

When such a cream is worn a dense film forms at once on the skin, which repels the water. Water-soluble active ingredients are therefore fairly pointless; they find only closed pores.

Formerly these beeswax creams were frequently combined with borax. This gives stable creams but also the **nerve poison boric acid**. Such creams should be avoided, even if they are so wonderfully nostalgic.

The emulsifiers of the W/O creams are lanolin and products thereof. Such as aluminium soaps and fatty alcohols. These water-binding raw materials are also called bases of absorption. Their capacity for retaining water extends to 1'500 per cent, normally 300 to 400 per cent.

The best example of a cream on the basis of absorption principle is the "**Nivea cream**". The emulsifier is described as "**Eucerit**". The essential component is **Cholesterol** - an anhydrous lanolin alcohol.

Cholesterol is a vital emulsifier for digestion. It is completely harmless in the cream. Though one might doubt there being a cream on the market today which claimed cholesterol as an ingredient.

We are so frightened today of the cholesterol image, as if it were poisonous or dangerous. It is not high cholesterol levels that are the origin of our vascular illnesses, but our lifestyle and nutrition, which leads to these cholesterol values. All the time we continue to blame cholesterol as the root of the evil, doctors and pharmaceutical companies will make use this "problem" to great advantage.

Other emulsifiers are soaps of magnesium, zinc and aluminium. They are no longer water soluble, but still bind considerable amounts of water in the oil phase.

The emulsifier properties of **cetyl alcohol** are less important than its ability to reduce the evaporation of water on the skin. Formerly it could be obtained from spermaceti oil, today it is amply available from coconut oil.

What active ingredients profess: Collagen and Night Repair

First of all one can find comfort in the fact that these much praised "active" ingredients are simply a sham.

If there were any truth in the claims of **Collagen**, **Elastin**, **DNA**, **Night Repair** and **Liposomen**, then the pharmacists guild would im-

mediately have got their hands on it. Naturally the pill peddlers would not in any way stoop to selling ordinary cosmetics, but substances which could in fact do all that "Night repair" and Liposomen lead us to believe would never be left to the cosmetics merchants to sell.

Meanwhile collagen has been somewhat surpassed in its significance as an advertising draw, instead of which now Elastin and most recently of all Micor Hydrospheres and modified collagen are creating new excitement.

This mysterious Collagen is nothing other than unspecified connective tissue, mostly cheap carcasses, cartilage, sinews and skins supply the raw materials.

The untenable Collagen promises, that the Collagen threads can penetrate human tissue with rejuvenating effect, were bound to lead to disappointment.

Then a new show horse was swiftly fetched by the cosmetics industry from the same protein advertising stable: Elastin.

Even the name promises new elasticity and tension for slack skin. But with Elastin, too, woman is not able to achieve the rejuvenation of her skin.

Elastin:

Like Collagen is a non-specific connecting tissue, which is not obtained from skins, but from tendons,- again usually the cheapest carcasses. It doesn't matter whether it is so-called native Collagens with undamaged double helix or simple edible gelatine, both remain beautifully on the skin and do not -as is maintained, become absorbed.

Rather proteins build a film on the skin which binds the moisture and smooths and conceals the tiny wrinkles by acting as a film, until the collagens are washed off again.

Night Repair:

Because of the effect of light certain parts of DNA are couple together like parts of the connective tissue. These instances of light damage are recognised by the organism in biochemical checks and removed by exchanging the wrongly interlinked places. Protein combination through light is considered to be one of the essential causes of (skin) ageing.

The repair process is said to be supported by an extract from the lactic acid bacteria lactobacillus bifidus and the ageing process is supposed to be reversed. That would be something!

The bacterial extracts may possibly have shown an increased metabolism, increased cell activity in the test, but there is some doubt as to whether this activation at night is really good for the skin, or the skin would have earned a rest at night.

Liposomen:

Thess micro capsules are said to put new life in old cells. Liposomen are already well-known in cosmetics.

If it were chemically and physically possible to purposefully enclose active ingredients in cells and set them free there, then pharmaceutical research would long since have had presentable results.

Nourishing creams:

Really embittered wars of belief have been waged about nourishing creams.

There is hardly one large cosmetics company that isn't offering a nourishing cosmetic.

The food control department is already sometimes seeing smaller manufacturers taking a misleading statement for granted : "The concept nourishing cream should be understood in the sense of feeding. It contains a nourishment supply with the aim of building up bodily substances or maintaining their function. Descriptions or details with cosmetic substances, which give the impression that the skin would be nourished from outside by using these products are considered misleading, since no nutritionally physiological significance can be attached to the substances contained within these products."

Anybody who knows anything about medicine knows that water penetrates very well through the skin, as well as various vitamins, plant active agents and aroma substances.

Undoubtedly these could contain the

functions of bodily substances, but the official food and cosmetic authority prefers to accept cosmetics containing formaldehyde and NLS or Dioxan in shampoos, which damage rather than nourish.

It already makes a difference to the skin, whether we use a cream made from paraffin and polyglycol ethers or offer it wheat germ oil, honey and vitamins.

In nourishing creams vitamin A provitamin A, E, B vitamins and components thereof can be perfectly reasonable. They can protect the skin. In any case when used in the usual cosmetic concentrations a damaging effect can be excluded.

For example honey is a valuable component, particularly of moisturising creams. The carbohydrates therein have a strong water binding capacity. The skin receives for itself carbohydrates to regulate the water supply, predominantly glucose and fructose. These sugars are removed from the skin by frequent washing. Honey is a good replacement for these: certainly only in small amounts otherwise the skin would be unpleasantly sticky.

On the skin are found, as well as sugars, amino acids - also for regulating the humidity of the skin.

In 1967 a natural moisture retaining substance appeared in the specialist literature, which has been known until now under the abbreviation **NMF** (Natural Moisturising Factor) in cosmetics.

This is a substance with the complicated chemical name sodium-2-pyrolidine-5-carboxylate.

Since it sounds so nice and complicated it is not written anywhere that this mysterious ingredient comes simply from glutamate by dehydration.

Conversely this pyrolidine forms with water glutamine acid once again, a naturally sour amino acid which is seen amongst other things on the table in Chinese restaurants as a **flavour enhancer**. So much for the moist enchantment.

The plant extracts cannot all be mentioned here with their many fold spectra of effects. I would like to mention a growing legal problem. In accordance with German control practice recommended active agents and ingredients must be contained in effective concentration in cosmetic products. Under Austrian law lowest as well as highest limits have been laid down.

Homoeopathic substances produce so many different effects in such a small amount that they would fall below a minimum limit and in Austria would therefore no longer have to be mentioned on the packaging of cosmetic products, whereas at the same time there are products with identical content in Austrian chemists on sale as medicines.

One cannot generalise about whether plant extracts make sense in creams or not. But it should at least say on the packaging , which extract we are dealing with and what dosage is in the cream.

Unfortunately the manufacturers of alternative cosmetics are mostly all as reticent with details on this point as is the cosmetics wholesale industry.

Plants work most effectively when fresh. Enzymes and other substances from plant juice do not keep long in creams.

An O/W cream almost always lends itself to being mixed with fresh plant and vegetable juices and used as a combination. Even self cooked herb teas are often better than dubious herbal promises in so many "natural creams".

From herbs straight to bees. Their queens receive a particularly strong feed from which they become bigger than the worker bees and are said to live ten times longer.

No wonder that the cosmetics industry is trying to capture it? Gelee royal (royal jelly), in creams and ampoules, can even be found in the injecting syringe.

If the juice were so effective as the sellers would have this certainly not unhealthy animal food to be, then one would be able to make ordinary bees into queens with it. But that cannot be done.

If it doesn't work on grown up bees, then it won't work on grown up women either.

Virtually all queen larvae are digested,- since there is not enough of this juice available- for they have the juice in them in any case.

It is only a small step from this insect "infanticide" to using embryonic (unborn) tissue in cosmetics.

The whole enchantment around living cells belongs here.

In creams for external use these are not usually so harmful, as can more often be the case with internal applications.

Usually the midwife discards the placenta after the birth. However there are companies which process placentae into creams. These are supposed to benefit circulation and the metabolism of the skin. There is some doubt as to whether this would always be a positive effect. Such results may also be obtained with normal irritants.

In laboratory tests an increase in the breathing of liver cells was measured using placenta extract. It is not known whether this was only a result of the oxygen-consuming extracts.

Placenta extracts should contain pregnancy maintaining hormones.

Perhaps the contents of the cream have another not so mystical effect?

Indoor Outdoor
Different sorts of creams

For historical reasons we are retaining the division into day and night creams. That has no bearing however whatever whether the creams have different effects if worn all day long or at night.

The appearance of night creams was such formerly that they were not congenial to company. It is not for nothing that they were worn under cover of darkness.

These might creams were over fatty creams or pastes which shone from the face as a thick fatty film. Made from anhydrous lanolin and seed oil they gave off a pungent smell that was hardly attractive.

The effect of this fatty packaging was to reduce the release of heat and water through the anointed skin. This caused swelling which smoothed out the skin.

Today we understand by "night creams" simply more fatty- based creams, mostly of the W/O type.

The night creams do not necessarily contain more fatty corpuscles than day creams , but rather those that spread less over the skin, i.e. they hardly spread at all. Amongst these are paraffin fat and saturated fats in particular.

In contrast the day creams contain a higher share of highly spreadable oils and waxes. In next to no time these could disappear even if used undiluted into the upper layer of the skin thus making the skin appear dry.

And anyone with a very dry skin puts it right by using a night cream throughout the day.

Foundation creams:

are O/W creams used as powders or foundation make up.

They contain stearate emulsifiers which almost instantaneously make the skin matt, firm and particularly act as a barrier, when we run our fingers over it.

Also these creams add fat and wax to the skin, only it is not seen. Since the cream foundation no longer smears it is a good basis for rouge. Moreover they reduce the compacting of powder pigments into the pores, thus improving cleansing later.

Slowly and quite carefully a meaningful difference between cream types comes into being: the creams for inside and out, or, in new German, Indoor and Outdoor creams.

In rooms with central heating most of us have very dry skin. Help is at hand for this in a cream with a heightened share of moisturising agents. These can happily be tinted , rouge pigments like iron oxide are harmless to the skin. Vitamins and some plant extracts - to compensate for distant nature - are further present in indoor creams.

Outdoor creams:

are supposed to primarily protect the skin from UV light, since this is the important external influence on ageing of the skin.

Protection from the sun is important at every season of the year for hands and face in respect of all parts of the body exposed to the

sun.

In the colder weather there is need for a cold protection for the skin. Such protective creams are already available for skiers and mountaineers. Since there is less circulation to cold skin, it lacks oxygen (oxygen deficiency). Furthermore such creams are also a protection against the damp.

An emulsion- base cream will only rarely help with these preparations. Emulsifier-free products are effective.

Certainly cosmetic research is in its infancy here.

Jars, pots, tubes - the Packaging

The classic packaging for the cream is the earthenware jar, the ointment jar. The many varieties of pots came from these.

Jars mostly look very attractive and beautiful. They have practical disadvantages against their aesthetic forbears.

The most important is their large surface. The cream is removed with the finger allowing many germs to reach the surface of the cream, and we are talking of all the germs under the sun here, which we constantly carry around with us in large amounts.

They do not represent a health risk, even when they grow in our cream. In some circumstances they can spoil the cream.

The industry likes to paint a black picture of the dangers arising from insufficiently preserved cream.

From a professional hygienist point a view, we should put forward the hypothesis that we should no longer prepare our food ourselves, because botulism and salmonella lurk everywhere, only ready- packed , pre-cooked and spoon fed food seems to offer safety.

If creams are spoilt they are mucousy and no longer smell nice. The cream is thrown away.

Since the industry would like to buy creams which are always consistent, which do not change in appearance or smell even when loaded down by so many germs, they have to mix such products with preservatives.

This danger is not so easily identified with the nose.

Creams in jars are open, because of their large surface area, to the oxidizing influence of oxygen in the air: they may become rancid.

This can only be avoided, and not basically stopped, by various additives. So then only oils should be used, which do not become rancid at all like, paraffin oil for example.

One can therefore safely assume with a cream in a jar, that the content is less valuable to the skin, because of the strong preservative which pollutes the skin.

Should we once again find a good cream in the jar we must treat it very carefully (not touching the edges of the jar) and remove the cream not with the fingers if possible, rather with a clean spatula.

Plastic tubes look appealing : they retain their full shape and the shining surface even if we treat them badly. Apart from this they only present disadvantages.

Mostly they consist of synthetic polyolefin today, which is permeable to oxygen. The oils of the cream quickly become rancid.

The portion of the cream which has been removed is replaced by drawn in air. When the tube is in use, a large amount of air is also present with a large surface on the cream.

The inside of these tubes is the ideal moisture chamber for germs. if such creams are not preserved in the best possible way? they quickly spoil.

Alternatively some creams are available in so-called laminate tubes. These consist of a composite film made of aluminium and polyethylene.

This avoids the evaporation of perfume and the penetration of oxygen bringing rancidness, but the other disadvantages of the tubes remain.

Currently the best guarantee for retaining product quality comes from metal tubes. Formerly tin and lead were used, today aluminium is used exclusively.

There are aesthetic disadvantages weighing against the practical preferences for these wrinkled, creased packages.

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