

Current Preservative Issues

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United States

- CIR continues to review preservatives and other ingredients
 - Will not reopen their conclusions on Parabens
 - Safe as used
 - Disagreed with the SCCS conclusions and reviewed the same data
 - Methyldibromo Glutaronitrile
 - safe as used in rinse-off products and safe at < 0.025% in leave-on applications
 - EU has banned this
 - CIR said the declining use shows no interest to reopen

CIR

- Benzoic Acid, Benzyl Alcohol, 1,2 glycols –safe
- Literature request for chlorophenesin

EU-SCCS

- Approved Ethyl Lauroyl Arginate HCl
- Plan to prohibit iso parabens and restrict propyl and butyl to 0.19 total.
- Reaffirmed the use of triclosan
- Finally proposed to ban Chloroacetamide

In 2008 All Preservatives Where Under Attack

- Parabens
- Chlorinated or iodine chemicals
- Made with Formaldehyde
- Isothiazolinones
- Glycols
- Alcohols

2011

- Chlorinated or iodine chemicals
 - Triclosan followed by IPBC
- Made with Formaldehyde
 - Toxic tub
- Parabens
 - Still attacked but....
- Isothiazolinones
 - Slowly growing in leave-on use, allergic reactions increasing
- Glycols
 - Linked to DEG
- Alcohols
 - Allergens
 - 1 mole ethoxylates

Triclosan

- It is a pesticide!
 - All preservatives approved by the EPA are classified as pesticides
- Contains chloroform
 - None found
- Contains dioxin
 - Must meet USP specifications. Very small trace amounts are permitted
- It is an endocrine disrupter
 - No evidence
- Causes antibiotic resistance
 - Original paper claiming this has never been duplicated

“Formaldehyde” releasers

- Formaldehyde is a very popular buzz word to scare consumers.
- An example is the junk science report-“The Toxic Tub”
- The safety of these type preservatives has been thoroughly studied and found to be safe.

Isothiazolinones

- Pesticides
- Neurotoxins
- Allergens
- Known human immune system toxicant
- Found safe at cosmetic use levels and restricted applications

Glycols

- Rapidly gaining in popularity, especially the C-8 1,2 diol (INCI Caprylyl Glycol)
- Denounced because of toxicity of ethylene glycol and diethylene glycol
- Guilt by association

Phenoxyethanol

- Guilt by association in France as it is a 1 mole ethoxylate and all simple 1 mole ethoxylates are toxic
- Like all ethoxylates, it can contain trace levels of 1,4 dioxane
- NGO's love to confuse the public with 1,4 dioxane and dioxin

Benzoic Acid

- Natural benzoic acid is safe
- Synthetic is not!
- Benzoic acid contains benzene
- Benzoic acid reacts with ascorbic acid to form benzene
 - Even the FDA sort of believes this!
 - This has been perverted to say benzoic acid reacts with citrus acid to form benzene

How?

Benzoic acid is made from the oxidation of toluene or the reaction of benzene with carbon monoxide.

How can benzoic acid react with ascorbic acid or citrus acid to form benzene?

Who Encourages This Junk Science?

- The Food, Drug and Cosmetic Industry!
- Marketers are quick to claim”Free” to sell one more bottle.
- The latest example-Colgate has a new liquid dish detergent claiming triclosan free. Yet Total[®] toothpaste has triclosan as the active ingredient!

State of Washington

- Bill 173-334 WAC was passed 7/21/11
- Manufactures of Children's products are required to notify the Department of Ecology when a chemical of high concern is in their product. This must be done annually.
- Covers all cosmetics except for OTC drugs making cosmetic claims. Cosmetics are considered Tier 1 (highest category-shortest time to register)

Preservatives on the List

- Propylparaben
- Butylparaben
- Methylparaben
- Ethylparaben
- Mercury compounds
- BHA

Denmark

- 12/20/10 they banned parabens for all cosmetics for children under 3 years.
- In March 2012, the CIR voted to develop guidelines for testing all cosmetic ingredients on children under 3.

Saudi Arabia

- March 3, 2011 prohibited Triclosan in all cosmetics including toothpaste.

EPA

- Requires testing on high production volume chemicals 1/7/2011
- Sorbic acid is on this list because of toxicity to algae

France

- A bill passed the lower chamber to ban all parabens and triclosan from all products
- Probably will not pass the upper chamber or a potential veto by the PM.

The Future

- Now retail outlets are dictating that they will not sell products with ingredients that they have been told are dangerous.
- Whole Foods started this with their “natural” junk science.
- Wal-Mart has joined in.
- Others will follow

The Latest Contamination Issue

- Natural, certified organic, ingredients contain spores
- Certified organic is a food designation but you know marketers...
- Spores then grow in emulsions and since they use weak preservatives, the batches are grossly contaminated.
- Source of spores? The “organic” fertilizer!

What will we do?

- The number of calls that I get of contaminated batches has grow from 1 to 2 a year, 10 years ago, to 1-2 a month!
- In all cases, it is due to GMP failures, hand-in-hand with “weak” preservative systems.
- The cost of better GMP’s to control this problem is unacceptable to marketing.
- Which is worst? Contamination or Preservatives or NGO’s junk science?

Natural Preservatives

- What is natural? What ever marketing says!
- Some preservatives found in nature but all are made synthetically from petroleum:
 - Benzoic acid
 - Sorbic acid
 - Phenethyl alcohol
 - Methylene glycol

Marketing Wants This

- If marketing wants this, someone will provide this.
- All of the “natural” preservatives have little if any safety data.

Grapefruit Seed Extract

- First appeared in the late 70's
 - Methylparaben in propylene glycol
- Reappeared in the early eighties
 - Triclosan in propylene glycol
- Latest version is still around
 - Benzethonium chloride

“Natural” Preservatives

- Some are sold as blends
- Some are sold as extracts
- Some are fragrances
- Some are oils
 - These don’t make much sense as preservatives work in the water

Blends

- Caribbean Natural Products: CaribNat E- Benzyl Alcohol, Potassium Sorbate, Sodium Benzoate, Water
- Premier Fragrances: Natural Preservier-Sodium Benzoate, D-Gluconic acid
- Jeen: Jeecide NAS-CC- *Murraya Koenigii* (curry) Leaf Oil, *Cinnamomum Zeylanicum* (Cinnamon) Leaf Oil, *Sesamum Indicum* (Sesame) Oil
- Jeen: Jeecide NAS- Glycerin, Citric Acid, Lactic Acid, Ascorbic Acid

Blends

- Cosmetochem: Deo-Usnate- Propylene Glycol, Usnea Barbata (Lichen) Extract, Tromethami
- Sabinsa: SabiLize Alpha-Cinnamomum Zeylanicum Bark Oil, Thymus Vulgaris (Thyme) Leaf Oil, Eugenia Caryophyllus (Clove) Leaf Oil, Cymbopogon Citratus Leaf Oil, Glyceryl Laurate, Garcinia Cambogia Fruit Extract
- Sabinsa: SabiLize Beta-Cinnamomum Zeylanicum Bark Oil, Thymus Vulgaris (Thyme) Leaf Oil, Eugenia Caryophyllus (Clove) Leaf Oil, Cymbopogon Citratus Leaf Oil, Maris Aqua

Blends

- Naturex SA:Effclear RWO-Propylene Glycol, Rosmarinus Officinalis (Rosemary) Leaf Extract, Water
- Naturex SA:Effclear OE 15%-Olea Europea (Olive) Leaf Extract, Maltodextrin
- Naturex SA:Effclear PG 10%-Punica Granatum (Pomegranate) Extract, Maltodextrin

Blends

- Campo Research PTE: Plantservative W Sr-
Water, Lonicera Caprifolium (Honeysuckle)
Flower Extract, Lonicera
Japonica(Honeysuckle) Flower Extract
- Campo Research PTE: Plantservative WM-
Isopropyl Myristate, Lonicera
Japonica(Honeysuckle) Flower Extract

Natural Chemicals

- Reseratrool
- Anisic Acid
- Palmitoyl Tripeptide-36
- Totarol

Fragrances

- Many fragrances have anti-microbial action
 - These include Essential Oils
- But they are oil soluble, not water soluble
- They add smell to the product
- Most contain EU Allergens
- Companies:
 - Bio Botanical
 - Sinergra

Conclusions

- There is no natural product that really functions as a preservative.
- At some point the mixtures or extracts get exposed to what they really are.
- Since safety data is lacking, this responsibility falls on you, the user.

Thank You!

