



Green certifications a review

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Agenda

-  About me and an announcement
-  An overview about certifications
-  Overview about Cosmos
-  Conclusions



About me

- I m a chemist, graduated in Venice, Italy
- Master in Food Science and Technology and diploma in Cosmetic Science
- Over 20 years in green chemistry cosmetic development
- In 2005 developed the first organic EDT while at Primavera, now Espa
- Wrote a handbook on Green Chemistry Preservation



Services

- Formulations and advice
- Sustainability consulting
- Bespoke formulation training
- ...





My new Eco Lab!

Made with PEFC
certified wood and
living roof



How cosmetic certifications started

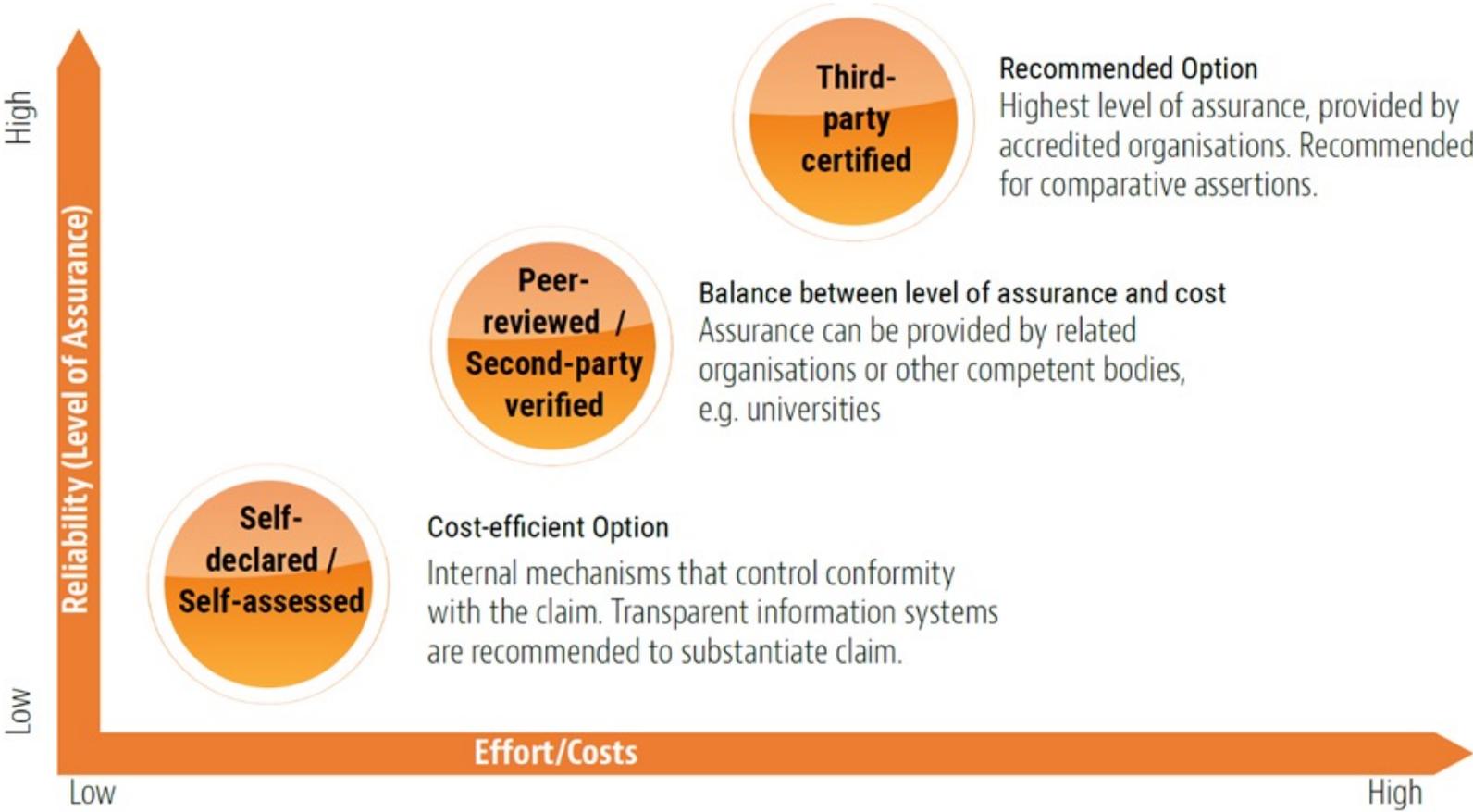
- Born out of the lack of legal definitions for natural and organic cosmetics and the need of consumers to be able to distinguish green products in the market place
- Organizations came up with their own definitions and created a private standard defining “Organic and natural beauty” and trade mark the symbol for it
- A brand can voluntarily follow the standard and get their products verified for compliance
- The product displays the logo or symbol to show consumers



Verification – 3 types

- Self certification, one declares natural organic/natural content according to ISO 16128
- Second party, the brand instructs directly the standard owner to verify the compliance by inspecting documents
- Third party the brand instructs a certification body who verify the standard compliance via inspecting documents and an audit. This system requires the certification bodies to be audited by IOAS or another accreditation body





Examples

- Self certification: ISO 16128, for example 68% naturally derived content
- Second party: Vegan Society, PETA
- Third party: Cosmos, Natrue, RSPO (supply chain certification allowing products claims)



Cosmos Standard

- Founded by BDIH, Cosmebio, Ecocert, ICEA, Soil Association
- Standard version 4.0, 4.1 coming out by the end of the year
- Embraces several criteria in one standard: green chemistry, promoting organic agriculture (Cosmos Organic) and ethically sourced animal derivatives, discouraging deforestation and the use of threatened plant species, no GMO allowed, no nano, no irradiation, green packaging and even detergents to clean manufacturing plant
- Audit by a certification body



Cosmos Standard

- Two levels of products certification: Cosmos Natural and Cosmos Organic
- Two levels of ingredients certification: Cosmos approved and Cosmos certified
- Several certification bodies in Europe, but also Turkey, Australia and South Korea



Cosmos Organic

- Cosmos Organic has the lion share with 28117 products
- Minimum organic content: 20% with the exception of rinse off, non emulsified products and mineral origin products, 10%
- Compulsory organic ingredients
- Only essential oils allowed
- Max 2% SyMo (both levels)

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The Green Chemist's Handbook on Cosmetic Preservation

Summary Chart 4 - Preservatives

Trade name	INCI	State	Use %	pH	°C	Cosmos status	NOI	Regs
	Benzyl alcohol, Glyceryl caprylate, Benzoic acid, Propanediol	L	0.5-1.2	4-6	<80	A	0.55	EU, US, China, Pro 65
	Propanediol, Glyceryl caprylate, Benzoic acid, Sorbic acid, Tocopherol	L	0.5-1	4-6	<80	A	0.4	EU, US, China, Pro 65
	Salicylic acid	S	<0.5	4-5	<38	A	1	EU, US, China, Pro 65
	Silver citrate, Citric acid, Aqua	L	<1	4-5	<40	A	1	EU, US, Pro 65
	Caprylyl glycol, Propanediol, Benzoic acid	L	<2	2-6	<80	C	0.8	EU, US, China, Pro 65
	Pentylene glycol, Potassium sorbate, Sorbic acid, Glyceryl laurate	L	0.5-1	2-6	<80	A	0.73	EU, US, China, Pro 65
	Benzyl alcohol, Glyceryl laurate	L	0.8-1	2-12	<80	A	0.07	EU, US, China, Pro 65
	Gluconolactone, Sodium benzoate, Calcium gluconate	S	0.25-2	3-7	<80	A	0.75	EU, US, China, Pro 65
	Sorbitan Caprylate, Benzyl alcohol	L	1-2.5	4-6.5	<80	A	0.6	EU, US, China, Pro 65?
	Sorbitan Caprylate, Propanediol, Benzoic acid	L	0.5-1.5	4-6.5	<80	A	0.85	EU, US, China, Pro 65?
	Sorbitan Caprylate, Potassium sorbate							EU, US

Applications

- Skincare
- Haircare, limited but improving every year
- Colour cosmetics (no nail varnish)
- Suncare
- Aerosols (Nitrogen only)

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Cosmos Standard Latest

- Packaging (June 25): each unit will need to meet at least 3 indicators (Reduce, Reuse, Renewable, Recycle)
- Palm oil/palm kernel oil derivatives: must be at least MB certified or organic
- Sulfated surfactants to be phased out by 2028

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Conclusions

- Certifications are becoming a popular way of validating products claims like natural, organic, vegan etc
- Not all certifications involve a third party validation
- Cosmos is a complex standard meeting many sustainability criteria requiring third party validation
- Careful consideration needs to be taken to choose the certification level and certification body depending on the product and market place
- Formulating according to the Cosmos standard requires a different approach to formulating but many applications are possible





Thank you for listening

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