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IFRA COMPLIANCE STATEMENT

IFRA Standards – 51st Amendment

PRODUCT INFORMATION

Product Name: Clove Leaf Oil

Supplier Product Name: Clove Leaf Oil Rectified 85%

Product Code: CL-185

Botanical Name: Syzygium aromaticum

INCI Name: Syzygium aromaticum Extract

CAS Numbers: 84961-50-2; 8000-34-8

EC/EINECS Numbers: 904-912-8; 284-638-7

Country of Origin: Indonesia

Plant Part: Leaves

Extraction Method: Steam distillation followed by fractional rectification

Product Type: Natural complex substance

IFRA Amendment: 51st Amendment

SCOPE OF CERTIFICATE

This certificate assesses Clove Leaf Oil (Rectified) with reference to the IFRA Standards up to and including the 51st Amendment, published in June 2023.

Clove Leaf Oil (Rectified) is not prohibited by the IFRA Standards. However, it contains a high concentration of eugenol, together with possible trace concentrations of methyl eugenol and other naturally occurring restricted constituents.

The maximum permitted concentrations below are calculated using the supplier's maximum eugenol concentration of 88.00%.

IFRA 51 MAXIMUM USE LEVELS

IFRA Category	Eugenol Limit in Finished Product	Maximum Clove Leaf Oil (Rectified)
Category 1	0.45%	0.51%
Category 2	0.14%	0.15%
Category 3	1.00%	1.13%
Category 4	2.50%	2.84%
Category 5A	0.64%	0.72%
Category 5B	0.64%	0.72%
Category 5C	0.64%	0.72%
Category 5D	0.21%	0.23%
Category 6	1.50%	1.70%



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IFRA Category	Eugenol Limit in Finished Product	Maximum Clove Leaf Oil (Rectified)
Category 7A	2.00%	2.27%
Category 7B	2.00%	2.27%
Category 8	0.21%	0.23%
Category 9	4.90%	5.56%
Category 10A	4.00%	4.54%
Category 10B	18.00%	20.45%
Category 11A	0.21%	0.23%
Category 11B	0.21%	0.23%
Category 12	No restriction	No restriction under Eugenol Standard

Values are rounded down or presented conservatively. The finished-product manufacturer should use the unrounded calculation when conducting the final assessment.

IFRA CALCULATION BASIS

Maximum material use level (%) =

Maximum eugenol level permitted in finished product (%) $\div$ 88 $\times$ 100

The calculation assumes that Clove Leaf Oil (Rectified) contains the maximum specified eugenol concentration of 88%.

IFRA-RESTRICTED CONSTITUENTS

Constituent	CAS Number	Concentration in Material	Regulatory Consideration
Eugenol	97-53-0	80.00–88.00%	Restricted under IFRA 51
Methyl Eugenol	93-15-2	Maximum 0.01%	Restricted; contribution must be assessed
Isoeugenol	97-54-1	Possible trace	Restricted where detected
Eugenyl Acetate	93-28-7	0.00–0.90%	Assess under applicable Standards
β -Caryophyllene	87-44-5	7.80–11.10%	Naturally occurring constituent
α -Humulene	6753-98-6	1.15–2.23%	Naturally occurring constituent

IMPORTANT CONDITIONS

For Categories 1 and 6, materials must comply with the applicable IFRA Standards and must also meet the relevant flavour-safety requirements where oral exposure is reasonably foreseeable.

These maximum use levels may be reduced if:



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- The batch contains more than the stated concentration of a restricted constituent.
- Other ingredients in the fragrance contain eugenol, methyl eugenol or isoeugenol.
- Another restricted constituent produces a lower permissible use level.
- Local regulations establish a lower concentration.
- The finished-product safety assessment requires a lower level.

DECLARATION

We hereby certify that Clove Leaf Oil (Rectified) complies with the IFRA Code of Practice and the IFRA Standards up to and including the 51st Amendment, provided that it is used at or below the applicable maximum concentration stated in this certificate.

The manufacturer of the finished product remains responsible for:

- Selecting the correct IFRA category
- Calculating contributions from all ingredients
- Assessing the complete finished formulation
- Confirming compliance with applicable legislation
- Conducting the necessary cosmetic or product safety assessment

Supplier

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