



Navy Heart Essential Oils

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IFRA COMPLIANCE DOCUMENT

Lemon Essential Oil (Cold Pressed) | IFRA 51st Amendment (June 2023)

Issue Date: May 25, 2026

PRODUCT IDENTIFICATION

Product Name	Lemon Essential Oil (Cold Pressed)
Botanical Name	Citrus limon
INCI Name	Citrus Limon Peel Oil
CAS Number	8008-56-8
Product Type	Essential Oil — Aromatic
Supplier	Navy Heart Essential Oils, Calgary, Alberta, Canada
IFRA Amendment	51st Amendment to the IFRA Code of Practice (published June 2023)
Document Issue Date	May 25, 2026

IFRA COMPLIANCE STATEMENT

Navy Heart Essential Oils hereby confirms that Lemon Essential Oil (cold pressed) is assessed in accordance with the IFRA 51st Amendment to the IFRA Code of Practice (published June 2023). This oil is compliant for use in the product categories listed below at the maximum concentration levels stated.

IMPORTANT — PHOTOTOXICITY: Navy Heart's Lemon Essential Oil is cold pressed and contains naturally occurring furocoumarins, including bergapten (5-methoxypsoralen) and other phototoxic psoralens. These compounds can cause skin reactions — including redness, darkening, and burns — when treated skin is exposed to UV light. The IFRA 51st Amendment restricts cold-pressed lemon oil to a maximum of 2.00% in all leave-on product categories where UV exposure is possible. For rinse-off products (soap, shower gel — Categories 7A, 9), home fragrance non-skin-contact (Category 10A), fabric rinse-off (Category 11A), and candles/wax melts (Category 12), there is NO IFRA restriction as phototoxic risk does not apply.

Key restricted constituents (typical composition): Limonene ~60–80% — Linalool ~10–15% — β -Pinene ~5–15% — γ -Terpinene ~5–10% — Bergapten (furanocoumarins) trace — Total furanocoumarins typically <0.001%. Note: Despite low bergapten content, the IFRA standard is applied conservatively to all cold-pressed lemon oil.

IFRA CATEGORY USAGE LIMITS — 51ST AMENDMENT

IFRA Category	Typical Product Applications	Max. Usage Level (51st Amdt.)	Navy Heart Recommended
1	Lip products (lip balm, lipstick, lip gloss, lip scrub)	2.00%	Up to 1% — phototoxic concern applies to lips; avoid sun exposure after application
2	Deodorant & antiperspirant (spray, stick, roll-on)	2.00%	Up to 1%
3	Facial makeup, eye products, foundation, blush	2.00%	Up to 1% ⚠ Phototoxic — avoid UV exposure
4	Hair leave-on (hair oil, hair serum, scalp treatment)	2.00%	Up to 1%
5A	Body leave-on: body lotion, butter, oil, cream	2.00%	Up to 1% ⚠ Phototoxic — avoid UV exposure after application
5B	Face leave-on: facial moisturiser, face cream, serum, toner	2.00%	Up to 1% ⚠ Phototoxic — do not use before sun exposure
5C	Hand leave-on: hand cream, hand lotion, cuticle cream	2.00%	Up to 1% ⚠ Phototoxic — see warning
5D	Baby leave-on: baby lotion, baby oil, baby cream, diaper cream	2.00%	Not recommended for baby products
6	Intimate wipes, feminine hygiene products	2.00%	Up to 0.5%
7A	Rinse-off body: shower gel, body wash, shampoo, bath products	Not Limited	Up to 3%
7B	Rinse-off hair: conditioner, hair mask, hair rinse	2.00%	Up to 1%
8	Intimate leave-on with anogenital exposure	2.00%	Not recommended
9	Rinse-off: bar soap, body wash, scrubs, bath bombs	Not Limited	Up to 3%
10A	Home fragrance: reed diffusers, pot pourri, sachets	Not Limited	Up to 10%
10B	Room spray, linen spray, air freshener spray	2.00%	Up to 1%
11A	Fabric treatment rinse-off (fabric softener, laundry detergent)	Not Limited	Up to 3%
11B	Fabric treatment leave-on (dryer sheets, pillow spray)	2.00%	Up to 1%
12	Non-skin contact: candles, wax melts, incense	Not Limited	Up to 10%

Note: Maximum usage levels are sourced from the IFRA 51st Amendment Standard for Lemon oil cold pressed (IFRA STD 092, Amendment 49 carried forward). The 2.00% limit across all leave-on categories is driven by the phototoxic potential of naturally occurring furocoumarins. Rinse-off and non-skin-contact categories are not restricted.

COLOUR KEY

Green	Not Limited — no IFRA restriction applies in this category.
White	Standard limit applies — use at or below the stated maximum.
Amber	Use with extra caution — sensitive application area (lips, baby, intimate). Lower recommended levels apply.
Red	Not Approved / 0% — this oil is not permitted in this category.

ADDITIONAL FORMULATION NOTES

Soap & rinse-off products (Categories 7A, 9): Cold-pressed lemon is unrestricted in rinse-off applications. The phototoxic furocoumarins wash away with the product. Up to 3% usage is typical and safe. Lemon provides a clean, bright, zesty top note with good performance in cold process and melt-and-pour soap.

Leave-on products — phototoxicity warning: The 2.00% limit in all leave-on categories is driven by the phototoxic potential of naturally occurring furocoumarins. Formulators must include a sun-avoidance advisory on any leave-on product containing cold-pressed lemon oil. Example label statement: "Contains cold-pressed lemon oil — avoid direct sunlight after application."

Alternative for higher leave-on use: If higher usage levels are needed in leave-on formulations, consider steam-distilled lemon oil or a furocoumarin-free (FCF) lemon oil, which allows significantly higher limits without phototoxic risk.

Oxidation & sensitization: Lemon oil is rich in limonene (~60–80%), which is susceptible to oxidation. Oxidized limonene is a potential sensitizer. Store lemon oil sealed, away from light and heat. Consider adding an antioxidant (e.g. vitamin E / rosemary extract) to formulations for extended shelf life.

Disclaimer: This IFRA compliance document is prepared in good faith based on known typical constituent data for this essential oil and the IFRA 51st Amendment (June 2023). Usage limits are based on typical composition ranges and information derived from supplier testing. It is the responsibility of the formulator to verify compliance for their specific formulation. Navy Heart Essential Oils makes no warranty as to the accuracy or completeness of this information. Always perform your own safety assessment before use in consumer products.

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