



the art and science of smart patch testing™

**NA92: dl-limonene ±**  
**CAS# 138-86-3**

## Patient Information

Your patch test result indicates that you have a contact allergy to dl-limonene ±. This contact allergy may cause your skin to react when it is exposed to this substance although it may take several days for the symptoms to appear. Typical symptoms include redness, swelling, itching, and fluid-filled blisters.

### Where is dl-limonene ± found?

dl-limonene ± is found in cosmetic products, cleaning products, air fresheners and paint strippers. It is the fragrance from citrus plants and thus used to give products a lemon-orange smell. It is also used in food manufacturing and in some medicines as a flavoring.

### How can you avoid contact with dl-limonene ±?

Avoid products that list any of the following names in the ingredients:

- (+-)-Dipentene
- (+-)-Limonene
- (+-)-alpha-Limonene
- 1,8(9)-p-Menthadiene
- 1,8-p-Menthadiene
- 1-Methyl-4-(1-methylethenyl)cyclohexene
- 1-Methyl-4-isopropenyl-1-cyclohexene
- 1-Methyl-p-isopropenyl-1-cyclohexene
- 4-Isopropenyl-1-methyl-1-cyclohexene
- AI3-00739
- Acintene DP
- Acintene DP dipentene
- Cajeputen
- Cajeputene
- Caswell No. 526
- Cinen
- Cinene
- Cyclohexene, 1-methyl-4-(1-methylethenyl)-
- DL-4-Isopropenyl-1-methylcyclohexene
- DL-Limonene
- Di-p-mentha-1,8-diene
- Dipanol
- Dipenten
- Dipentene
- Dipentene (+-)
- Dipentene 200
- EINECS 205-341-0
- EINECS 231-732-0
- EPA Pesticide Chemical Code 079701
- Eulimen
- Flavor orange
- Goldflush II
- HSDB 1809

- Inactive limonene
- Kautschin
- Limonen
- Limonene
- Mentha-1,8-diene (DL)
- NSC 21446
- NSC 844
- Nesol
- Orange flavor
- PC 560
- UNII-9MC3I34447
- Unitene
- alpha-Limonene
- d,l-Limonene
- delta-1,8-Terpodiene
- dl-Limonene
- p-Mentha-1,8-diene, (+)-
- p-Mentha-1,8-diene, DL-

## What are some products that may contain dl-limonene ±?

### Household Products:

- Armor All Car Wash Wipes-Discontinued Product
- Citra Solv, Natural Citrus Cleaner and Degreaser
- Custom Grout & Tile Cleaner, Ready to Use-Old Product
- Elmers Sticky Out Cleaner
- GOJO Natural Orange Pumice Hand Cleaner
- Rust Oleum Pure Strength Cleaner/Degreaser

### Hair Care Products:

- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Medium Natural Blonde 80, Butternut
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Brown 40, Dark Chocolate
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Beige Blonde 72, Sweet Latte
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Champagne Blonde 82, Champagne Fizz
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Medium Golden Mahogany Brown 535, Chocolate Caramel
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Ash Blonde 91, Ginger Ale
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Auburn 67, Ginger Spice
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Beige Blonde 92
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Ash Brown 61, Mochaccino
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Champagne Blonde 82, Champagne Fizz
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Golden Blonde 93, Honey Butter
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Reddish Brown 65, Summer Berry
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Beige Blonde 72, Sweet Latte
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Brown 40, Dark Chocolate
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Medium Golden Blonde 83, Cream Soda
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Rich Auburn Blonde 76, Hot Tamale
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Beige Blonde 92
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Medium Mahogany Brown 558, Chocolate
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Golden Blonde 73, Honey Dip
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Mahogany Brown 45, Cinnamon Stick
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Reddish Brown 65, Summer Berry
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Medium Ash Blonde 81, Vanilla Malt
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Auburn 67, Ginger Spice
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Rich Auburn Blonde 76, Hot Tamale
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Light Ash Brown 61, Mochaccino
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Medium Natural Blonde 80, Butternut
- L'Oreal Preference Fade Defying Color Shine System, Permanent, Medium Auburn 5MB
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Mahogany Brown 45, Cinnamon Stick
- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Dark Golden Blonde 73, Honey Dip

- Garnier Nutrisse Level 3 Permanent Creme Haircolor, Golden Brown B3, Cafe Con Leche
- LOreal Preference Haircolor, Medium Ash Blonde
- LOreal Preference Fade Defying Color Shine System, Permanent, Medium Amber Copper Brown 5AM
- LOreal Preference Fade Defying Color Shine System, Permanent, Soft Black 3
- Nair Shower Power Hair Remover, Thick Formula

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\*For additional information about products that might contain **dl-limonene** ± go to the Household Product Database online (<http://householdproducts.nlm.nih.gov>) at the United States National Library of Medicine. These lists are brief and provide just a few examples. They are not comprehensive. Product formulations also change frequently. Read product labels carefully and talk to your doctor if you have any questions. These are general guidelines. Talk to your doctor for more specific instructions.