

THC and CBD in Cosmetics, Vapes, OTCs, Supplements, Foods, and

Do we really gotta test this too?

Troubles in the Lab



The Trend

3:36 PM Sun Jun 9

ulta.com

www.google.com/search?client=safari&hl=en-us&ei=5EG7XKrQJOaA0... Your LeaderScore Results Hempz Original Herbal Body Moisturizer | Ulta Beauty

ULTA BEAUTY


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The Men's Event **SHOP NOW** | FREE SHIPPING \$35 Ends Sunday 6/9

Home / Bath & Body / Body Moisturizers / Body Lotion & Creams / Original Herbal Body Moisturizer

sale



HEMPZ
Original Herbal Body Moisturizer
Size 17.0 oz | Item 2084187
★★★★★ REVIEWS

~~\$23.00~~ **\$13.80**

1

Add To Bag

Store Availability

The Men's Event

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Details

Hempz Original Herbal Body Moisturizer is enriched with 100% Pure Organic Hemp Seed Oil and blended with natural extracts to provide dramatic skin hydration and nourishment to help improve the health and condition of skin. Hemp Seed Oil is one of nature's richest sources of Essential Fatty Acids and Key Amino Acids containing natural proteins, vitamins, antioxidants, and minerals, vital for healthy skin conditioning. Paraben Free. Gluten Free. 100% Vegan.

How to Use



The Trend

3:48 PM Sun Jun 9

huffpost.com

73%

LIFE

Sephora's Best CBD And Cannabis Beauty Products

psychoactive ingredient in the marijuana plant. The chemical that is responsible for weed's

psychoactive effects is called THC, or [tetrahydrocannabinol](#), which is mostly removed from CBD products. [The biggest difference between CBD and THC?](#) THC gets you high, while CBD doesn't. That's why [pure CBD is legal](#).

 **thelordjones** 
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HIGH CBD
PAIN & WELLNESS FORMULA
BODY LOTION
LORD JONES
50 ml

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The Trend



Common Treatments Reported by Physicians/WHO for CBD and THC in Topicals

- **Eczema**
- **Psoriasis**
- **PMS**
- **Sleeping**
- **Muscle Pain**
- **Muscle Weakness**
- **Stiffness**
- **Anxiety**
- **Stress**
- **Nausea**
- **Inflammation**
- **Insect Bites**
- **Seizures**
- **Restless Legs**
- **Parkinson's**
- **Tremors**
- **Cancer treatment**
- **Acne**

Symptoms Reported with High Concentration Consumption

- Headache
- Stomach ache
- Diarrhea
- Increased heart rate
- Difficult breathing
- Disorientation
- Paranoia
- Anxiety
- Vomiting



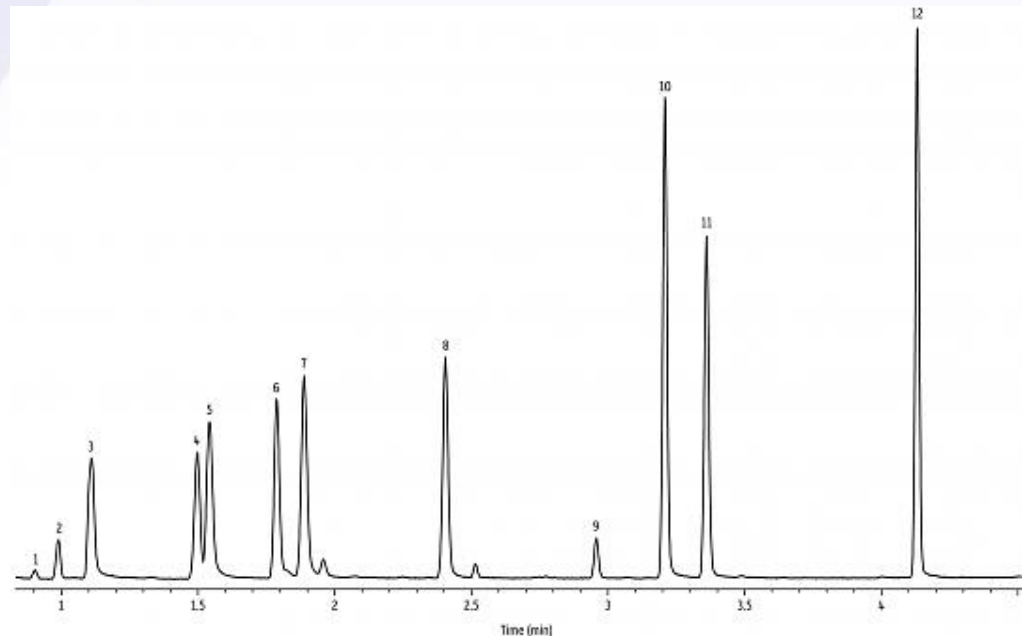
Which brings us to...

- **Laboratory analysis**
- **Standards:**
 - **USP**
 - **States**
 - **Others**



THC and CBDs

- **Laboratory Analysis**
 - State by State Differences
 - Primarily focused on Agricultural standards
- **Product Analysis?**
 - USP, ASTM, AOAC,
 - or ?



Current Medical Use Preparations

- **Chopped or Powdered material for eating or inhaling**
- **Powdered Botanical extracts – (carcinogens)**
- **Tinctures**
- **Infusions by soaking in water and then straining**
- **Decoctions by boiling water**
- **Fluid extracts – reflux in alcohol**
- **Solid Dose (caps and tabs)**
- **Boiling Before Use**
- **Rectal Use**
- **Vaginal Use**
- **Transdermal Patches**
- **Nasal and Inhalation**
- **Ophthalmic**
- **Burning**
- **Inhalation**
- **Injectable/Parenteral**



Raw Material Testing Issues

- **Chemical Standards established by industry**
- **Extraction of cannabinoids from the plant**
- **Test method requirements vary by state**
- **Test specifications vary by state from 3 to 5 significant figures in final result**
- **Sampling issues exist**
- **Cross pollination issues**



Finished Product Testing Issues

- **State by state variability**
- **Lab to lab variability based upon testing methods and extraction process**
- **Ingredient co-elution**
- **Product solubility and sample preparation**



Industry Issues

- **Variability of primary standard**
- **Variability in sample preparation**
- **Variability in test methods**
- **Variability in reporting results**
- **Variability in pharmaceutical vs food vs cosmetic vs marijuana testing labs**
- **Integrity**



Production Issues

- **Variability in raw materials**
- **Variability in manufacturing process**
- **Variability in testing results**
- **Variability in mixing capability**
- **Variability in personnel**
- **Variability in calculations**



Quality Control Issues

- **Unified methods – GC, HPLC, UPLC, titration?**
- **Variability of similar equipment**
- **Variability of sample preparation**
- **Variability of solvents**
- **Variability of analysts**
- **Variability of specifications**
- **Integrity**

Tooth Fairy Certificate

Today


Date: 11-12-2010

You have lost a tooth

Name: AMMA

Congratulations !

Signed by
The Tooth Fairy



Recommendations

- **Establish THC and CBD primary standards**
- **Establish specific and validated methods for raw material, extracted material, and cream based finished product**
- **Establish a USP cream formula**
- **Establish specific calculation methods**