CBD Isolate Transdermal Skin Patch

- Transdermal CBD Patch application has therapeutic potential for relief of Arthritis pain-related behaviours and inflammation without evident side-effects
- CBD is hydrophobic and has poor oral bioavailability
- Reduced joint swelling
- Rheumatic diseases
- Anti-inflammatory treatment
- Clinical management of MS and its associated symptoms
- Exert neuroprotective effects against EAE
- Chronic pain treatment
- Skin disorders, itchiness, rashes, blistering, skin fragility and repeated wound healing cause itching, pain, limited mobility, and recurrent infections
- Nonpsychoactive cannabinoid
- Noninvasive drug delivery
- Nonaddictive nonopioid therapy
- Limited effect on higher brain function

Instructions for use: Place one CBD patch on a relatively hair free part of the body (the inner arm is perfect). After 24 hours remove and replace with a new patch in a slightly different position to allow the skin to breathe. (If there is any residue of adhesive left on the skin, wash off with warm soapy water).

Price: R300 for a pack of 15 Transdermal CBD GlobalDerm HomeoPatch 50mg/Patch ***Active Ingredients:*** *Each patch contains: CBD ISOLATE 50mg*

MORE INFORMATION:

The nonpsychoactive cannabinoid, cannabidiol (CBD), has great potential for the treatment of chronic and 'breakthrough' pain that may occur in certain conditions like cancer. To fulfill this goal, suitable noninvasive drug delivery systems need to be developed for CBD. Chronic pain relief can be best achieved through the transdermal route. Combining IN and transdermal delivery for CBD may serve to provide patient needs-driven treatment in the form of a nonaddictive nonopioid therapy. *Department of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington, KY 40536-0082, USA* The achievement of a significant steady-state plasma concentration indicates that CBD is useful for chronic pain treatment through this route of administration. The results of this study indicated that CBD could be successfully delivered through the IN and transdermal routes.

CBD Isolate – Transdermal cannabidiol reduces inflammation and pain - arthritis.

Department of Pharmaceutical Sciences, University of Kentucky College of Pharmacy, Lexington, KY, 40536-0082, USA.

Department of Physiology, University of Kentucky College of Medicine, Lexington, KY, 40536-0298, USA.

Current arthritis treatments often have side-effects attributable to active compounds as well as route of administration. Cannabidiol (CBD) attenuates inflammation and pain without side-effects, but CBD is hydrophobic and has poor oral bioavailability. *Topical drug application avoids gastrointestinal administration, first pass metabolism, providing more constant plasma levels.*

Transdermal CBD significantly reduced joint swelling, limb posture scores as a rating of spontaneous pain, immune cell infiltration and thickening of the synovial membrane in a dose-dependent manner. Exploratory behaviour was not altered by CBD indicating limited effect on higher brain function. Using the CBD Patch driving and daily activities can continue as normal, you will not feel spaced out, dehydrated or out of balance with the patch. This is a boon for anyone wanting to maintain and/or improve cognitive function as the last thing you would want is the brain fog, high or hallucinations experienced with using cannabis edibles and oils

These data indicate that topical CBD application has therapeutic potential for relief of arthritis pain-related behaviours and inflammation without evident side-effects. © 2015 European Pain Federation - EFIC®

CBD may exert neuroprotective effects against EAE. All these data suggest an interesting new profile of CBD that could lead to its introduction in the clinical management of MS and its associated symptoms at least in association with current conventional therapy. **A new formulation of cannabidiol shows therapeutic effects of experimental *autoimmune encephalomyelitis*.**

1 *IRCCS Centro Neurolesi "Bonino-Pulejo", Via Provinciale Palermo, contrada Casazza, 98124, Messina, Italy.*

2 *Dipartimento di Scienze del Farmaco, Università del Piemonte Orientale, Largo Donegani 2, 28100, Novara, Italy.*

3 *Consiglio per le Ricerca e la sperimentazione in Agricoltura - Centro di Ricerca per le Colture Industriali (CRA-CIN), Viale G. Amendola 82, 45100, Rovigo, Italy.*

4 *IRCCS Centro Neurolesi "Bonino-Pulejo", Via Provinciale Palermo, contrada Casazza, 98124, Messina, Italy. emazzon.irccs@gmail.com.*

Cannabidiol-transdermal delivery and anti-inflammatory effect. *Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine, The Hebrew University of Jerusalem, 91120, Israel.* ethosomes enable CBD's skin permeation and its accumulation in a depot at levels that demonstrate the potential of transdermal CBD to be used as an anti-inflammatory treatment. **However, its oral administration is associated with a number of drawbacks**. The objective of this study was to design a transdermal delivery system for CBD by using ethosomal carriers. CBD ethosomes were characterized by transmission electron microscopy, confocal laser scanning microscopy and differential scanning calorimetry. Transdermal application of ethosomal CBD prevented the inflammation and edema

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Transdermal delivery of cannabidiol attenuates binge alcohol-induced neurodegeneration of an alcohol use disorder. *Department of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, 789 S. Limestone St., Lexington, KY 40536, USA.* Excessive alcohol consumption, characteristic of alcohol use disorders, results in neurodegeneration and behavioral and cognitive impairments that are hypothesized to contribute to the chronic and relapsing nature of alcoholism. These results demonstrate the feasibility of using CBD transdermal delivery systems for the treatment of alcohol-induced neurodegeneration. This experiment found similar magnitudes of neuroprotection. © 2013.

Human skin permeation of Delta8-tetrahydrocannabinol, cannabidiol and cannabinol. *Division of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington, KY 40536-0082, USA.* The purpose of this study was to quantify the in-vitro human skin transdermal flux of Delta8-tetrahydrocannabinol (Delta8-THC), cannabidiol (CBD) and cannabinol (CBN). These cannabinoids are of interest because they are likely candidates for transdermal combination therapy. CBD, the most polar of the three drugs for improved transdermal delivery rates.

Self-initiated use of topical cannabidiol oil for epidermolysis bullosa

1 School of Medicine, Stanford University, Stanford, CA, USA.
2 Department of Dermatology, West Virginia University, Morgantown, WV, USA.
3 Department of Dermatology, School of Medicine, Stanford University, Stanford, CA, USA.
Epidermolysis bullosa is a *rare blistering skin disorder that is challenging to manage because skin fragility and repeated wound healing cause itching, pain, limited mobility, and recurrent infections*. Cannabidiol, an active cannabinoid found in cannabis, is postulated to have anti-inflammatory and analgesic effects. We report 3 cases of self-initiated topical cannabidiol use in patients with epidermolysis bullosa in an observational study. One patient was weaned completely off oral opioid analgesics. *All 3 reported faster wound healing, less blistering, and amelioration of pain with cannabidiol use*. © 2018 Wiley Periodicals, Inc.

CERTFICATE OF ANALYSIS

ADM LABS
A ADM GROUP COMPANY
4785 Tejon St
Denver, CO 80211 USA
(720) 323-2428

Batch: ADML-PIAV187
Test Performed: 01/02/2019
Sample Type: Isolate

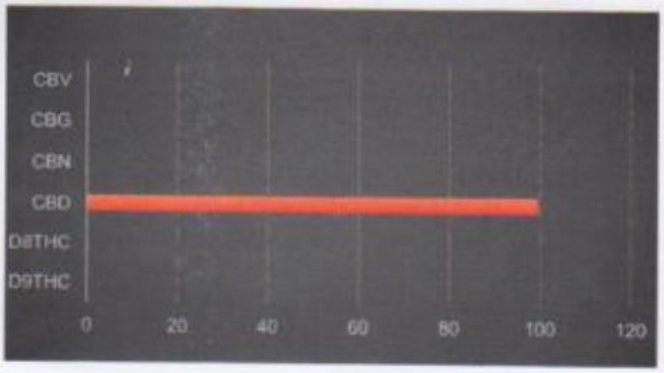
PREPARED FOR: ADM GROUP

TOTAL THC*: 0.00 %
THC + THC-A % by weight

TOTAL CBD*: 99.58 %
CBD + CBDV % by weight

Cannabinoid Profile

Compound	%	mg/unit
ΔθTHC	0.00	0.00
ΔδTHC	0.00	0.00
CBD	99.58	995.8
CBN	0.00	0.00
CBG	0.00	0.00
CBV	0.00	0.00
TOTAL	99.58%	995.8



Total Cannabinoids* = sum of all cannabinoids. Total THC*= THCa x .(0.877) + d9-THC. Total CBD = CBDa x .(0.877) + CBD. LOQ = Limit of Quantitation. The reported result is based on a sample weight with the applicable moisture content for that sample. Unless otherwise stated all quality control samples performed within specifications established by the Laboratory.

N/R= Not Reported thus no analysis was performed, ND= Not Detected thus the concentration is less than the Limit of Quantitation (LOQ).

APPROVAL

ADM LABS
A ADM GROUP COMPANY

Domenike Febo
Domenike Febo, Lab Director
01/02/2019

Arman Motiwalla
Arman Motiwalla, Managing Partner
01/02/2019

Steve Scanlon
Steve Scanlon, Managing Partner
01/02/2019

This product has been tested by ADM Labs, LLC using valid testing methodologies and a quality system as required by state law. Values reported relate only to the product tested. ADM Labs, LLC makes no claims as to the efficiency, safety or other risks associated with any detected or non-detected levels of any compounds reported herein. This certificate shall not be reproduced except in full, without the written approval of ADM Labs, LLC.

Certificate of Analysis

*Amendment to CoA 190218S002-002

Sample Name:	NB4 Lot# 0219-TRP-0002
LIMS Sample ID:	1902185002
Batch #:	
Sample Metrc ID:	
Sample Type:	Concentrate, Product Inhalable
Batch Count:	
Sample Count:	
Unit Mass:	
Serving Mass:	
Density:	

Date Collected:	02/18/2019
Date Received:	02/18/2019
Tested for:	Tyson Holistics Holdings Inc.
License #:	
Address:	
Produced by:	
License #:	
Address:	
Overall result for batch:	

Moisture Test Results

%

Water Activity Test Results

Aw Action Limit Aw

Cannabinoid Test Results **02/19/2019**

Cannabinoid analysis utilizing High Performance Liquid Chromatography (HPLC, QSP 5-4-4-4)

	mg/g	%	LOD mg/g	LOQ mg/g
THC	ND	ND	0.017	0.2
THCa	ND	ND	0.02	0.2
CBD	984.9	98.49	0.012	0.2
CBDa	ND	ND	0.012	0.2
CBN	ND	ND	0.006	0.2
CBDV	3.4	0.34	0.0034	0.2
CBDVa	ND	ND	0.014	0.2
CBG	ND	ND	0.012	0.2
CBGa	ND	ND	0.017	0.2
THCV	ND	ND	0.009	0.2
Δ8 - THC	ND	ND	0.021	0.2
CBC	ND	ND	0.011	0.2

Sum of Cannabinoids:	**988.3**	**98.83**
Total THC (Δ9THC+0.877*THCa)	ND	ND
Total CBD (CBD+0.877*CBDa)	984.9	98.49
	Action Limit mg	
THC per Unit		
THC per Serving		

Terpene Test Results

Terpene analysis utilizing Gas Chromatography - Flame Ionization Detection (GC - FID)

mg/g % LOD mg/g LOQ mg/g

Batch Photo

Sample Certification

Scan to verify at sclabs.com
Sample must be marked as public to be viewable

BV

Bryce Vale, LQC Verified By
Date: 03/26/2019

Josh Wurzer, President
Date: 03/26/2019

These results relate only to the items tested. This test report shall not be reproduced except in full, without written approval of the laboratory.
The uncertainty of measurement associated with the measurement result reported in this certificate is available from SC Laboratories upon request.

APPLICATION GUIDE

Apply by any conventional method including reverse roll and knife-over-roll. Product is designed to be ready for use. If dilution is required, however, ethyl acetate (urethane grade) is suggested. It is strongly advised that evaluations of the adhesive be carried out to determine whether the product is suitable for use under individual coater operating conditions. Typical adhesive deposition is 0.8 to 1 mils dry for most applications. Drying in a zoned oven is recommended with the last zone as hot as possible to maximize cure rate. Cure is dependent upon drying conditions (heat, dwell time).

FDA COMPLIANCE The dry film components comply with the compositional requirements of the FDA Indirect Food Additive Regulations 21 CFR 175.105 "Adhesives".

STORAGE, HANDLING AND PRECAUTIONS

Under normal conditions, product is stable for a minimum of 6 months in unopened containers. Store drums in dry areas and keep them tightly covered to prevent solvent loss and contamination. Rotate stock using the oldest material first. Mix the adhesive thoroughly before use and do not mix it with any other products. Consult the Material Safety Data Sheet (MSDS) for hazardous ingredients, flammability, disposal, and related handling information.

Product contains flammable solvents; eliminate all sources of ignition before use. Use with adequate ventilation, avoid breathing of vapor; minimize skin contact. Migratory materials in some face stocks and end-use substrates, e.g., vinyl films and foams, may affect performance. It is recommended that products be thoroughly tested for a particular application before large-scale use is attempted.

STATEMENT OF PRACTICAL USE

As with all pressure sensitive materials, this product should be tested thoroughly under end-use conditions to ensure it meets the requirements of the specific application. This product has not been assessed for medical applications.

MSDS ONLY
PRIOR TO PROCESS OF SOLVENT EXTRACTION

Appearance and odor

Color: Yellow
Appearance: Visccus liquid
Odor: Characteristic Acrylic

Statement of Hazard

Warning! Flammable liquid and vapor
Causes eye irritation
May cause skin irritation

Chronic Hazard Warning

Contains material which caused reproductive disorders in laboratory animal tests. Reproductive hazard – contains ethanol which may cause birth defects or other adverse effects on pregnancy. Risk of effects depends on duration and level of exposure.

Potential Health Effects

Effects of Exposure -

The estimated acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4 hour inhalation (rat) LC50 values for this material are > 5,000 mg/kg, >2,000 mg/kg, and >1O mg/l, respectively. Direct contact with this material may cause moderate eye and mild skin irritation. Overexposure to vapors may cause central nervous system depression. The toxicological properties of this material have not been fully investigated. Refer to section 11 for toxicology information on the regulated components of this product.

Composition/Information on Ingredients: OSHA regulated components

Component/CAS No	% (w/w)	Carcinogen
Ethyl Acetate 141-78-6	35-40	
Tolulene 108-88-3	5-10	IARC 2B
Vinyl Acetate 108-05-4	1-5	IARC 2B ACGIHA3
Ethanol	25-30	IARC 1

Physical and Chemical Properties

Color:	yellow
Appearance:	viscous liquid
Odor:	characteristic acrylic
Boiling point:	not available
Melting point:	not applicable
Vapor pressure:	not available
Specific gravity/density:	0.91 @ 25 C
Vapor Density:	not available
Percent volatile (% by wt)	not available
pH:	not applicable
Saturation in Air (% by Vol):	not available
Evaporation rate:	not available
Soluability in water:	negligible
Volatile Organic Content:	not available
Flash point:	--5.6C 22F Pensky-Martens Closed Cup
Flammable Limits (% by Vol):	not available
Autoignition Temperature:	not available
Decomposition Temperature:	not available
Partition coefficient (n-octanol/water):	not available
Odor Threshold:	not available