

# CAMPO RESEARCH COFFEE OIL



novel functional ingredients for  
multi-purpose formulations



**CAMPO RESEARCH PTE LTD**

Level 30, 6 Battery Road, Singapore 049909

Tel: (65) 63833203 / 202 / 63833631

Direct Fax (65) 63833632 / 63834034

Email: [sales@campo-research.com](mailto:sales@campo-research.com)

Website: <http://www.campo-research.com>

CAMPO® Multi-Purpose Cosmetic Base Chemicals & Active Ingredients

CAMPO® Novel Functional Active Cosmetic Ingredient & Raw Materials

# INDEX

[Your body contours by cellulite fat busting and skin UV protection](#)

[Caffeine's biochemical effects](#)

[Coffee Oil Composition](#)

[Technical Specification](#)

[Material Safety Data Sheets](#)

[UV spectrum of caffeine](#)

[How it Goes Together](#)

### **IMPORTANT NOTICE**

Specifications may change without prior notice. Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, however, cannot assume any liability or risk involved in the use of its natural products or their derivatives, since the conditions of use are beyond our control. Statements concerning the possible use are not intended as recommendations to use our products in the infringement of any patent. We make no warranty of any kind; expressed or implied, other than that the material conforms to the applicable standard specifications.

**Ask about our Herbal Natural Products Chemistry Consultancy Services – Product Registration EEC/UK New Drug Development (NDA-US); Quasi-Drug Topicals (MOHW\_Japan); Development of Standards, Analysis & Profiles of Phytochemicals; Literature searches, Cultivation of Medicinal Plants, Clinical-Trials, Development of new uses for Phytochemicals and Extracts; Contract Research and Development Work in Natural Products for Novel Drugs, New Cosmetic Active Ingredients for Active Topica/OTC Cosmetic with functionality and Consumer-perceivable immediate-results, New Food Ingredients for Nutraceuticals & Functional Foods.**

Welcome - [ http://campo-research.com/ ]

Haircare Suncare Skincare Eyecare Bath Slimming Ingredients Help

non-listed ingredients enquiry cosmetics ingredients what's new in campo best seller ingredient INCI/CTFA names distributor enquiry new innovations contacting us formularies press releases export enquiry our profile MSDS

**福 CAMPO RESEARCH ACTIVE INGREDIENTS**

Campo Novel Active Cosmetic Ingredients. The Ingredients That Impart Consumer Perceivable Functional Activities To Your Cosmetic End Products !!!

24 hrs. campo@publ.jpn.vocaltec.com support@campo-research.com

*What does this cup of Coffee do to your body contours by cellulite fat busting and skin UV protection?*



**Campo Research knows all  
For Detailed Answers  
Contact Campo's Representatives:**



## ***Caffeine's biochemical effects***

There are four ways in which caffeine stimulates the nervous system. of these, one is of primary importance. Another has some level of importance, and the other two only occur at unrealistically high levels of caffeine in the body.

The first of these methods, and the most important, is blocking adenosine receptors. As caffeine has a similar structure to the adenosine group, but also has more heavily electrophilic and nucleophilic functional groups than adenosine (as, for instance, seen in cyclic AMP). This means that caffeine will fit adenosine receptors as well as adenosine itself will. Thus, cyclic AMP remains active, rather than being broken down.

Second among the effects of caffeine is phosphodiesterase inhibition. The phosphodiesterase class of enzymes includes a number of enzymes responsible for breaking down cyclic AMP, thus depriving the body of an energy supply. Caffeine fools phosphodiesterase into attacking it instead, which inhibits the breakdown of cyclic AMP. However, the concentration of caffeine required for this effect to become significant is sufficiently high (of caffeine) that the adenosine blocking remains the dominant factor but a novel occurrence of biochemical effect of phosphodiesterase inhibition action will be the conversion of UV rays striking the human skin, which radiation are then converted in the presence of caffeine to more pronounced phosphodiesterase inhibition (cellulite fat busting).

The other two laboratory effects of caffeine have been judged insignificant in actual biochemical situations. (not of cosmetic importance)

# Coffee Oil Composition

**Spark Chromatography- May 23<sup>rd</sup> 1995 Test run: 7.05.05 - 7.05.038**

**Results: in % ( percentage )**

<u>Chemical</u>	<u>(%) Percentage</u>
1,3,7-Trimethyl-2,6-dioxapurine	75%
1,3-Dimethylxanthine	10%
3,7-Dethylyxanthine	1.0%
Phenols	5.5%
Salicyclic acid-3,3-5,5-Trimethylcyclohexylester	6.0%
Other methylated purine derivatives (undermined as cAMP phosphodiesterase inhibitors)	2.0%

This assay results certify to be correct.

.....  
Dr. JayaGopi  
Director - Labs. Services  
JCT Kampoyaki Consumer Safety Lab.

## **COFFEE OIL**

### **SOLUBILITY**

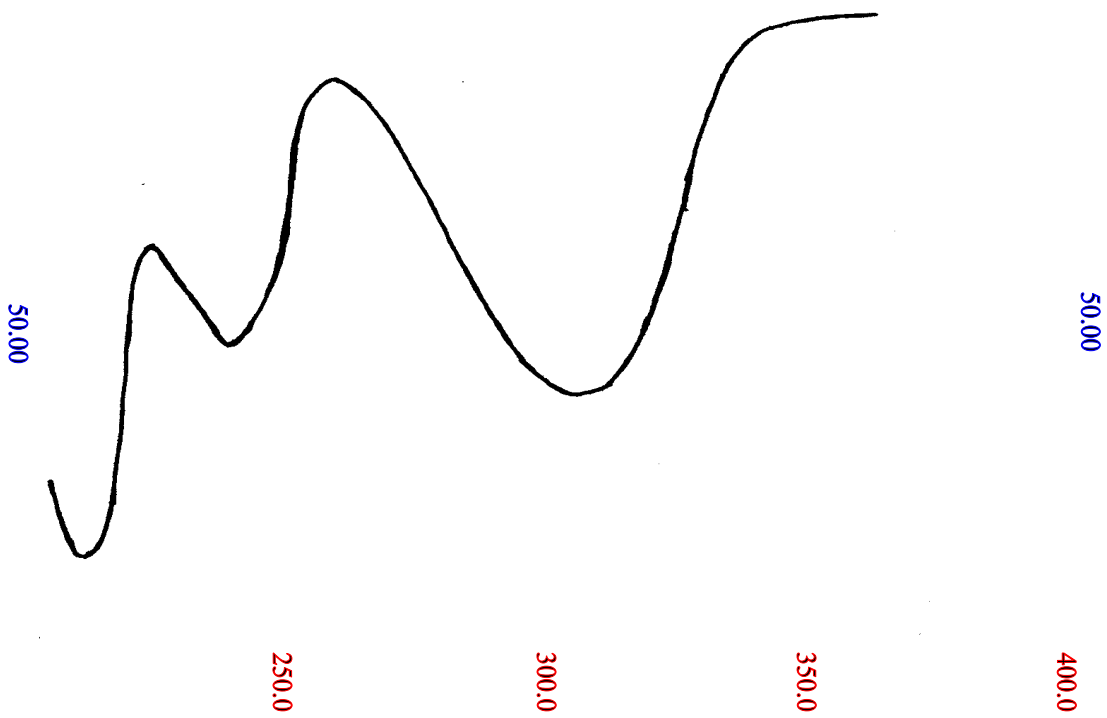
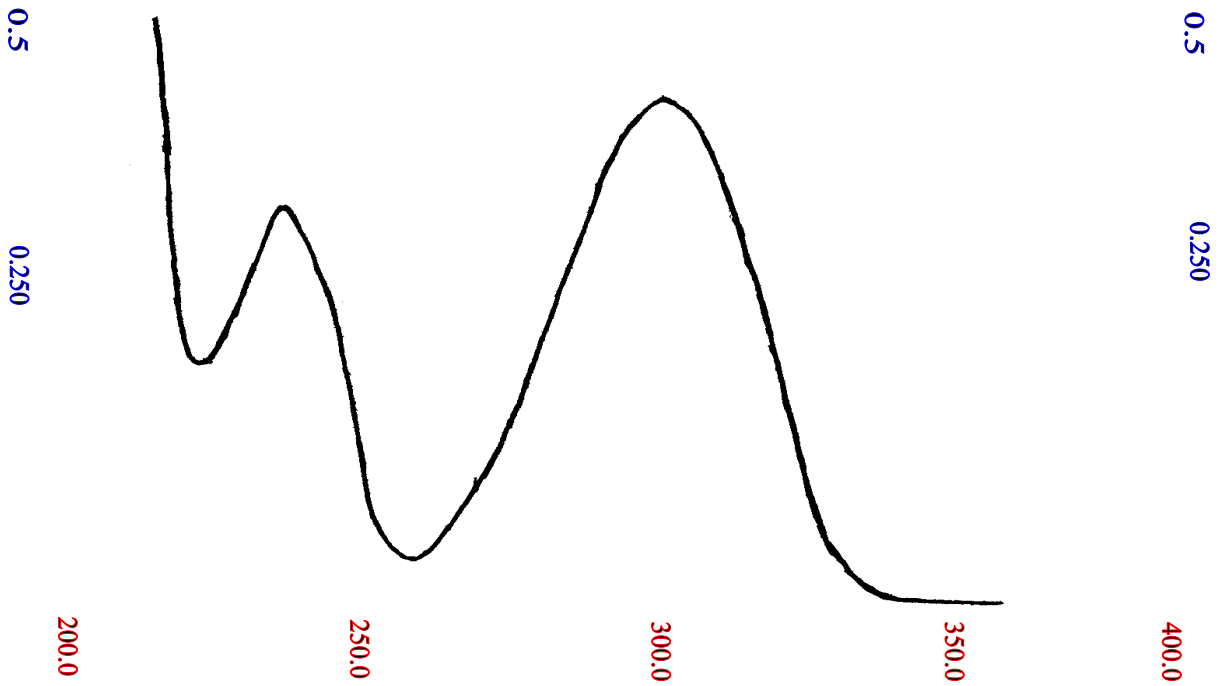
Clear Colorless Ceramide	Approx. 35%
Isopropylmyrisate	Approx. 40%
Peanut Oil	Approx. 30%
Cetoil	Approx. 40%
Paraffin oil (Mineral Oil)	Approx. 20%
Neem Oil	Approx.30%
Thulasi Ashwini Root Oil	in any proportion
Sesame Oil	in any proportion

Coffee Oil has an excellent photostability. This UV-filter is used with 8% in an O/W- base as a cream to compare and ascertain the sun protective factor.

### **SPECIFICATION:**

NAME :	Campo Coffee Oil
SYNONYM :	Coffee Arabica Oil Extract
PRODUCT # :	563.97
LATIN NAME :	Coffea Arabica
INCI/CTFA NAME :	Coffea Arabica Seed Extract
PARTS USED :	Seed
APPEARANCE :	Free flowing clear brownish tint liquid
ODOUR :	Slight characteristic of brazilian type of coffee smell
SPECIFIC GRAVITY :	0.835 – 0.999
At 20 deg.Cent	
<b><u>AVERAGE DOSAGE :</u></b>	5 - 6 %

The following graphs show the COFFEE OIL spectra  
**Coffee Oil**



**CAMPO RESEARCH Pte Ltd**  
**TECHNICAL SPECIFICATION**

PRODUCT Name (Campo Research) Other Trade Names (Campo Research) Existing CTFA/INCI Name	<b>CAMPO COFFEE OIL (DECOLORIZED, DEODORIZED)</b> Coffea Arabica Oil Extract (563.98) CAMPO COFFEE OIL (DECOLORIZED, DEODORIZED)
Chinese Translation	小果咖啡 (COFFEA ARABICA) 籽提取物
CAMPO PRODUCT # HS Code:	<b>963.988 - HS CODE 1302</b> 1302.19.0000
CTFA Monograph ID	8659 – Coffea Arabica (Coffee) Seed Extract
CAS# CAS# EU	84650-00-0 – Coffea Arabica (Coffee) Seed Extract 84650-00-0 (EU) – Coffea Arabica Seed Extract
EINECS Number and Name EINECS# EU	283-481-1(1) – Coffea Arabica (Coffee) Seed Extract 283-481-1 (EU) – Coffea Arabica Seed Extract
EINECS Number and Name EINECS# EU European Commission–Health & Consumer Cosmetics–CosIng	Coffea Arabica (Coffee) Seed Extract <a href="http://ec.europa.eu/consumers/cosmetics/cosing/index.cfm?fuseaction=search.details_v2&amp;id=55646">http://ec.europa.eu/consumers/cosmetics/cosing/index.cfm?fuseaction=search.details_v2&amp;id=55646</a> Coffea Arabica Seed Extract – 283-481-1 (EU)
BATCH/LOT #	<b>See COA Batch Lot</b>
SPECIES	Coffea arabica Syn: Coffea Arabica Seed Extract
PARTS USED	Seed
RAW MATERIAL - ORIGIN	INDONESIA
CONCENTRATION	50kg = 1kg extract
COMMENTS	A Quality Management System, compliant to the International Standard ISO 9001, was used to manufacture and test this material  <b>*Please take note that all specifications are liable to changes without prior notice.</b>

<b>Specification Parameter Analysis</b>	<b>Specification Range</b>	<b>Results</b>	<b>Methods</b>
Physical Form	Oil free flowing Liquid	Conforms	Visual
Colour	Almost Clear Colorless Liquid (Light Yellowish Tint)	Conforms	Visual
Odour	Characteristic - faint	Conforms	Olfactory
Specific Gravity (20deg.C)	0.850 - 1.999	See COA	USP XXIX/Par,DMA35
Refractive Index (20deg.C)	1.400- 1.490	See COA	USP XXIX/DGF IV C (52)
pH(20deg.C.) (100% concentrate)	3.5 - 5.5	See COA	USP XXIX/DGF H III (92)
Water Content	0.0050 - 0.0350	See COA	-
Viscosity	-	-	-
Water Solubility	-	See COA	-
Dry Residue (160deg.C/2hrs)	5% - 45%	See COA	Mettler 16J
Preservation	None	Conforms	-
Pesticide Content	None	Conforms	Pflanzaniaschuttal1989
Total Germs	<100 CFU/ml	Conforms	USP XXIX/Ph.Eur.2.6.12(97)
Total Yeast/Mold	<100 CFU/ml	Conforms	USP XXIX/Ph.Eur.2.6.12(97)
Heavy Metals (Total)As,Pb,Hg	<0.060 ppm	Conforms	USP XXIX/Ph.Eur.2.6.12(97)
Composition	<u>Percentages (%)</u>		<u>Assay Method</u>
Purines:	75.00%		GC/SC
Xanthines	11.00%		GC/SC



Salicylates	6.00%	GC/SC
Phenols	5.50%	GC/SC
CAMPO Phosphodiesterase inhibitors	2.50%	GC/SC

CAMPO RESEARCH Pte. Ltd, SINGAPORE  
CAMPO RESEARCH USA, INC SAN DEIGO CA 92111, & Manhattan, New York City, USA  
CAMPO RESEARCH s.r.o., Brno, Czech Republic  
CAMPO RESEARCH Pvt. Ltd, CHENNAI, INDIA  
CAMPO RESEARCH CANADA LTD, TORONTO, CANADA

MATERIAL SAFETY & CONSUMER SAFETY TESTING LABS.  
DIV. OF JTC KAMPOYAKI SINGAPORE  
EMERGENCY MATERIAL SAFETY / ACCIDENTAL RELEASE CENTER Contact:  
*Emergency Tel.no: +(65)-63833202/63833631(24hours) /63228551/63228503*  
*Emergency Fax No: +(65)-63833632(24hours),63824680, 63228558*  
*EMAIL: msds911@campo-research.com*

Campo Coffee Oil ©.

© US. Library-of Congress 1989-2017 ©

**“(SAFETY DATA SHEET – compliant to GHS)”  
 CONFIRMS TO EC DIRECTIVE 91/155/EEC, EC REGULATION  
 NO#1272/2008, AMENDED EC REGULATION NO#790/2009 and Complies  
 to The EU Cosmetic Products Regulation (Regulation (EC) No 1223/2009)  
 effective on July 2013., and to EU Commission Regulation No.358/2014/9 of 9<sup>th</sup>  
 April 2014 amending Annexes II and V, to EU Regulation No No.1223/2009 of  
 The European Parliament and of The Council on Cosmetic products,  
 (Effective Date 31<sup>st</sup> October 2014) AND to US DEPT.OF LABOR-Occupational  
 Safety & Health Admin directives and compliant to Globally Harmonized  
 System of Classification and Labeling of Chemicals (hereinafter referred to as  
 “the GHS”)., and Complies and Confirms to the Requirements of State of  
 California Proposition 65.**

A Quality Management System, compliant to the International Standard ISO 9001, was used to manufacture and test this material

<http://www.osha.gov/dsg/hazcom/ghs.html>

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html)

<http://www.hc-sc.gc.ca/ahc-asc/intactiv/ghs-sgh/index-eng.php>

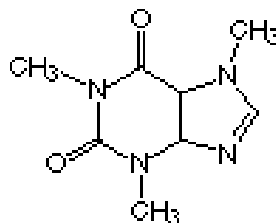
DATE OF ISSUE	February 10th 1997-Reviewer - Dr Balasubramaniam PhD
DATE OF LATEST REVISION	Aug. 23th 1998- Rev'wer- Dr Fergus Jes .G.Velasquez Bsc. Med Tech, MD <b>February 10<sup>th</sup> 2012 – Reviewer=Joshua Teo</b> <b>February 5<sup>th</sup> 2013 – Reviewer =</b> <b>Balasubramaniam M PhD</b> <b>12<sup>th</sup> February 2015 - Joshua Teo BSc. Chem,</b> <b>Balasubramaniam M PhD &amp; Oksana</b> <b>Nemchenko MD</b> <b>15<sup>th</sup> May 2016 - Joshua Teo BSc. Chem,</b> <b>Balasubramaniam M PhD &amp; Oksana</b> <b>Nemchenko MD</b>
<b>1</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
COMMERCIAL NAME:	<b>CAMPO COFFEE OIL (DECOLORIZED, DEODORIZED)</b>
OTHER TRADE NAME:	COFFEA ARABICA OIL EXTRACT
LATIN NAME:	<b>Coffea arabica</b>
CTFA ADOPTED NAME /INCI NAME: Chinese Translation	<u>Coffea Arabica Seed Extract</u> 小果咖啡 (COFFEA ARABICA) 籽提取物
<b>INTERNATIONAL CHEMICAL IDENTIFICATION</b> <i>(EC REGULATION NO#1272/2008 AMENDED NO#790/2009)and Compliant to the GHS:</i>	<b>COFFEA ARABICA SEED EXTRACT</b>
MANUFACTURER: (cGMP MFG. FACILITIES) :	<b>CAMPO RESEARCH Pte Ltd</b> <b>Level 30, 6 Battery Road,</b> <b>Singapore 049909.</b>
EMERGENCY TELEPHONE NUMBERS:	(65)-63833631/(65)-63228503 (Singapore)

<b>2</b>	<b>HAZARDS IDENTIFICATION</b>
<p>NOT CLASSIFIED AS DANGEROUS ACCORDING TO DIRECTIVE 67/548/EEC OR ITS AMENDMENTS.</p> <p><b>HAZARD CLASS and CATEGORY CODE(s)</b></p> <p><b>HAZARD STATEMENT CODE(s)</b> <i>(EC REGULATION NO#1272/2008 AMENDED NO#790/2009) and compliant to the GHS</i></p> <p><b><u>GHS CLASSIFICATION :</u></b> This material is Non-hazardous according To UN-GHS Criteria.</p> <p><b><u>GHS LABEL ELEMENTS:</u></b></p>	<p>DIVISION 1.6; NON-HAZARDOUS NO HAZARD STATEMENT</p> <p>PICTOGRAM : NONE No GHS Pictogram (Totally Non-Hazardous) Division 1.6; NO HAZARD STATEMENT</p> <p>PICTOGRAM : NONE No GHS Pictogram (Totally Non-Hazardous) Division 1.6: No Hazard Statement.</p> <p>No GHS Pictogram (Totally Non-Hazardous) Division 1.6: No Hazard Statement.</p>
<b>3</b>	<b>COMPOSITION / INFORMATION ON INGREDIENTS</b>
<p>100 PERCENT CARBON-DIOXIDE GAS EXTRACTED COFFEA ARABICA. -PLANT PARTS OIL SOLUBLE COMPONENTS</p> <p>CTFA Monograph ID:</p> <p><b>CAS#</b> <b>CAS# EU</b></p> <p><b>CAS NO# (CAS Name)</b> <i>(EC REGULATION NO#1272/2008 AMENDED NO#790/2009)and compliant to the GHS</i></p> <p>EINECS Name and Number EINECS# EU</p> <p><b>EINECS# (EINECS Name)</b> <i>(EC REGULATION NO#1272/2008 AMENDED NO#790/2009) and compliant to the GHS</i></p> <p>EINECS Number and Name EINECS# EU European Commission–Health &amp; Consumer Cosmetics–Cosing</p> <p>RISK PHRASES SAFETY PHRASES 25-26</p> <p><b><u>GHS CLASSIFICATION :</u></b> This material is Non-hazardous according To UN-GHS Criteria.</p> <p><b><u>GHS LABEL ELEMENTS:</u></b></p>	<p><b>Coffea Arabica (Coffee) extract</b></p> <p>8659 – Coffea Arabica (Coffee) Seed Extract</p> <p>84650-00-0 – Coffea Arabica (Coffee) Seed Extract 84650-00-0 (EU) – Coffea Arabica Seed Extract</p> <p><b>84650-00-0 - Coffea Arabica Seed Extract</b></p> <p>283-481-1(1) – Coffea Arabica (Coffee) Seed Extract 283-481-1 (EU) – Coffea Arabica Seed Extract</p> <p><b>283-481-1 - Coffea Arabica Seed Extract</b></p> <p>Coffea Arabica (Coffee) Seed Extract <a href="http://ec.europa.eu/consumers/cosmetics/cosing/index.cfm?fuseaction=search.details_v2&amp;id=55646">http://ec.europa.eu/consumers/cosmetics/cosing/index.cfm?fuseaction=search.details_v2&amp;id=55646</a> Coffea Arabica Seed Extract – 283-481-1 (EU)</p> <p>None Not Mandatory</p> <p><b>PICTOGRAM : NONE</b></p> <p><b>No GHS Pictogram (Totally Non-Hazardous) Division 1.6: No Hazard Statement.</b></p>
<b>4</b>	<b>FIRST AID MEASURES</b>
<p>EYE CONTACT:</p> <p>ORAL INGESTATION:</p>	<p>Wash with water or standard eye wash solution. Seek medical advice, if irritation occur and persist.</p> <p>Essentially edible in small quantity (10-50gms)</p>

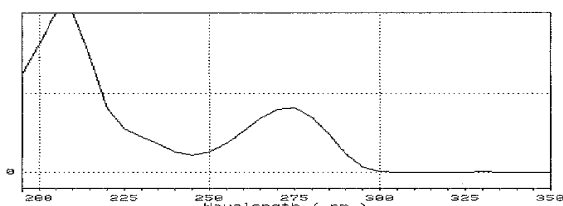
	SKIN CONTACT:	with bitter after taste. Wash with water or shower.
<b>5</b>	<b>FIRE FIGHTING MEASURES</b>	
	<b>COMBUSTIBLE BUT PRESENTS NO SPECIAL FIRE HAZARD.</b>	
	EXTINGUISHING MEDIA:	Treat as oil fire when store in HDPE drums with CO2, dry foam or dry chemical.
	PROTECTIVE EQUIPMENTS FOR FIGHTERS:	Standard Equipments.
<b>6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>	
	ABSORB ONTO AN INERT MATERIAL AND SCRAPE UP. REMOVE RESIDUE BY SCRUBBING WITH HOT WATER OR DETERGENT SOLUTION.	
<b>7</b>	<b>HANDLING AND STORAGE</b>	
	STORE IN SEALED CONTAINERS UNDER NORMAL COOL, DRY WAREHOUSING CONDITIONS.	
<b>8</b>	<b>EXPOSURE AND PERSONAL PROTECTION</b>	
	IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICE AND HANDLING USING STANDARD EYE PROTECTION.	
<b>9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>	
	PHYSICAL FORM:	Oil free flowing liquid
	COLOUR:	Almost Clear Colorless (light yellowish tint)
	ODOUR:	Characteristic - faint
	BOILING POINT:	90 deg. cent.
	MELTING POINT:	-
	VISCOSITY @ 20°C (mPa.S)	-
	FLASH POINT:	-
	FLAMMABILITY SOLID/GAS:	N/A
	AUTO FLAMMABILITY:	N/A
	SPECIFIC REFRACTIVE:	1.400 – 1.490
	EXPLOSIVE PROPERTIES:	N/A
	pH(20deg.C) (100% solution)	3.50 - 5.50
	OXIDIZING PROPERTIES:	N/A
	RESIDUE ON DRYING (160 deg.C/2hrs.)	5%-45%
	VAPOUR PRESSURE:	N/A
	DENSITY (specific gravity 20 deg.C):	0.850– 1.999
	WATER SOLUBILITY:	Insoluble
	OTHER SOLUBILITY:	In Most Cosmetic Solvents
	BULK DENSITY:	-
	PARTITION COEFFICIENT: (OCTANOL/WATER)	-
	EXPLOSIVE LIMITS:	-
<b>10</b>	<b>STABILITY AND REACTIVITY</b>	
	THERMAL DECOMPOSITION:	Stable under normal conditions of use.
<b>11</b>	<b>TOXICOLOGICAL DATA</b>	Animal Tests Last Done 1992, as requirements of the then <b>EC DIRECTIVE 91/155/EEC</b>
	ORAL:	LD50 > 36,000 MG/KG (Body Wt.) Rat Essentially Non-Toxic and Edible in Small Quantity.
	DERMAL:	Expected To Be Essentially Non Toxic.
	INHALATION:	Slight Ethanolic Sting – irritation
	<b>SPECIFIC CONCENTRATION LIMITS M-FACTORS (EC REGULATION NO#1272/2008 AMENDED NO#790/2009) compliant to the GHS.</b>	36,000 MG/KG (Body Wt.); CATEGORY 5 Essentially Non-Toxic and Edible in Small Quantity.

<b>TOXIC EFFECTS:</b>	
SKIN:	Primarily Irritation Index (PII) = 0.0 ( Non-Irritating - Skintex ), Not A Primarily Irritant. Non-irritant / Non-sensitizer as per Repeated Patch Insult Test on 50 Human volunteers. Human Repeated Patch Test 48 hours: 50/50 completely non-irritating / non-erythema causing <b>ingredient at 10% concentrate in water</b> on 50 human volunteers
EYE:	Very Mild/Minimal - Not A Transient Conjunctival Irritant at 10% concentrate in water (Eyetex - Eyetex classification ).
<i>Summarized toxicological data as shown here are formation bounded under Non-Disclosure Agreement with various clients as when these Toxicological Data were established or their exclusive uses.</i>	
<b>12</b>	<b>ECOLOGICAL INFORMATION</b>
BIODEGRATION:	Expected To Be Ultimately Biodegradable.
FISH TOXICITY:	No Data
BACTERIAL & VIRAL TOXICITY:	No data
WGK CLASS:	WGK (Self Classification)
<b>13</b>	<b>DISPOSAL CONDITIONS</b>
DISPOSE OFF ACCORDING TO A RECOGNISED METHOD OF CHEMICAL WASTE DISPOSAL.	
<b>14</b>	<b>TRANSPORT INFORMATION</b>
UN NUMBER# :	N/A
UN NAME:	Not Assigned
IMDG CODE/CLASS:	Not Hazardous
IMDG CODE PAGE NO.	N/A
ICAO/IATA AIR CLASS:	Non-Hazardous
ICAO/IATA AIR CLASS PACKING GROUP:	N/A
RID/ADR CLASS:	Non-Hazardous
ADNR CLASS:	Non-Hazardous
<b>LABELLING:</b> ( <i>EC REGULATION NO#1272/2008 AMENDED NO#790/2009</i> ) and compliant to the GHS.	
<b>PICTOGRAM SIGNAL WORD CODE(s):</b>	No GHS Pictograms (Totally Non-Hazardous)
<b>HAZARD STATEMENT CODE(s):</b>	Division 1.6; No Hazard Statement
<b>SUPPLEMENTARY HAZARD STATEMENT CODE(s):</b>	Similar Division 1.6; No Hazard Statement
<b>15</b>	<b>REGULATORY INFORMATION</b>
OCCUPATIONAL EXPOSURE LIMITS:	N/A
<b>U.S. State of California Proposition 65 INGREDIENTS Presence</b>	<b>None</b> (Exempted from CA Prop 65 Register)
<b>EU Commission Regulation No.358/2014/9 of 9<sup>th</sup> April 2014 amending Annexes II and V, to EU Regulation No No.1223/2009 of The European Parliament and of The Council on Cosmetic products</b>	<b>“Contains No Parabens and nor contains any Branched Chain Parabens”.</b> (EU Regulation No.358/2014/9 of 9 <sup>th</sup> April 2014)
<b>16</b>	<b>OTHER INFORMATION</b>
USES AS A COSMETIC ADDITIVE	0.5 – 5.0 %
This format and information is compiled by Novel Natural Product Chemistry/ Novel Drug Discovery cGMP Labs Kobe, Japan; for Campo Research, Kyoto and Singapore.	<b>*Please take note that all specifications are liable to changes without prior notice.</b>





## UV spectrum of caffeine



Retention time : 2.75min  
 Optimum wavelength : 210nm  
 Sensitiveness : 1.48ng  
 Absorbance / 100ng : 0.4738 abs.sec

### Apparatus and Analysis conditions

Mobile phase : (10mM HClO<sub>4</sub> + 10mM NaClO<sub>4</sub>470%) + (CH<sub>3</sub>CN30%)

Flow-rate : 1.0mL/min.

Column : FineSIL C18T (25cm x 4.0mm i.d.)

(monomeric ODS, particle size 5 x 10<sup>-6</sup> m ) (Shiseido).

Wavelength : 210-350nm.

Column temperature : 50c

880 PU LC pump (Jasco, Hachioji, Japan) System controller 801-SC

- Gradient device 880-02
- Detector MULTI-320
- Data processing system DP-L320/98(Jasco, Hachioji, Japan)  
(Time Accumulation 0.8sec.)

### Physical Properties

*Molecular Formula* : C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>

*Molecular weight* : 194.19

*Chemical name* : 1,3,7-trimethylxanthine

*Properties* : soft, white crystal or powder. Non smell or Slight-Characteristic Coffee. Taste is slightly bitter.

*melting point* : 235-238c

*log P* : -0.07 ( Experimentally determined value ) 0.07 ( Calculated value )

*Ionization Constant • @pKa* : 0.6; 14.0

### Solubility :

Chloroform : easily soluble

Water, Ethanol : partially soluble

Ether anhydride : hardly soluble

Oral administration / 1day : 300-900mg

### References

COMPREHENSIVE MEDICAL CHEMISTRY

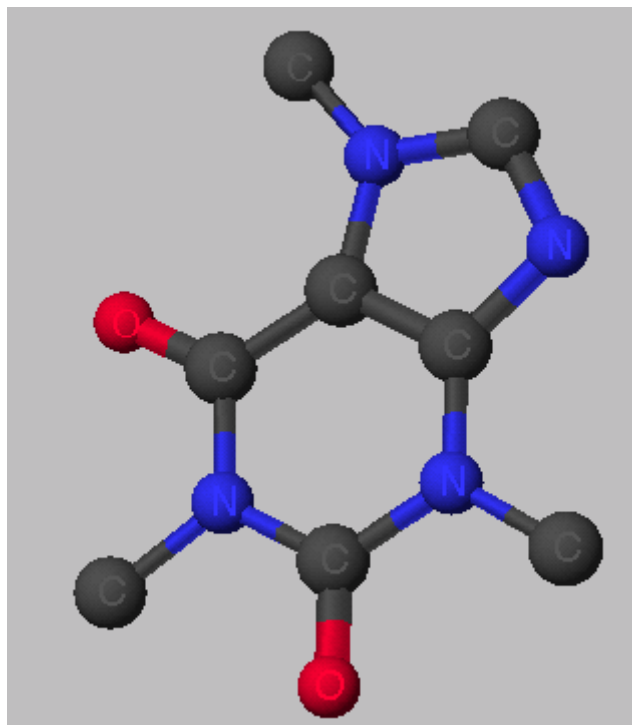
The Rationary Design, Mechanistic Study & Therapeutic Application of Chemical

Compounds Volume 6 ( PERGAMON PRESS )

[Other Information]

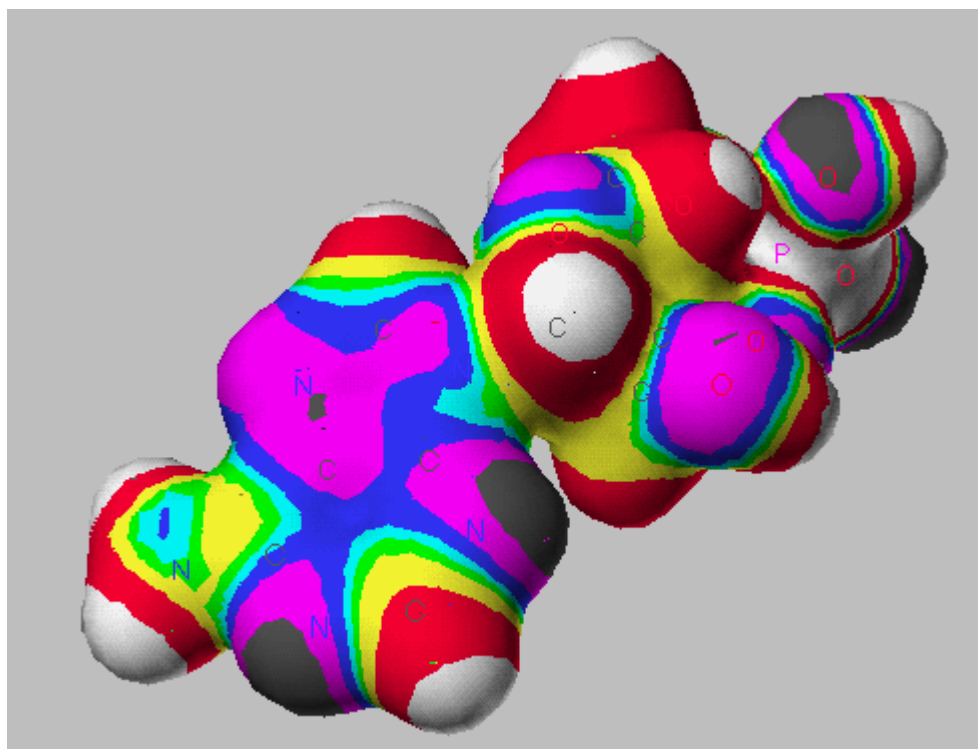
# ***How it Goes Together***

## ***UV Filter/Absorbance and Anti-Cellulite Fat Neutralization Activities***

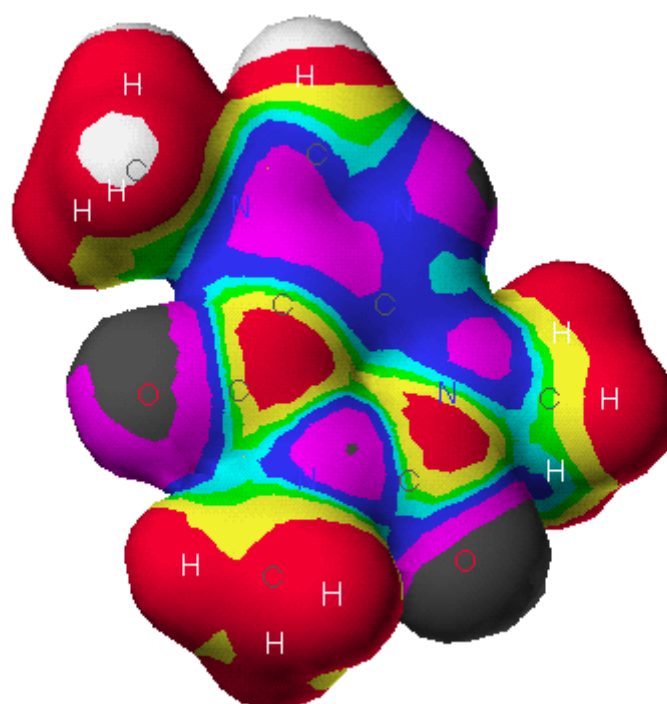


As can be seen above, caffeine consists of two carbon/nitrogen rings with oxygen and methyl groups as substituents. The fused rings are similar to those in adenine (a component of DNA, ATP, and cyclic AMP) -- only the substituents differ.

**(cAMP) -the cellulite fat buster ( 3-D fig. in next page)**



**The Novel 1,3,7-trimethylxanthine cellulite fat buster**



**DISCLAIMER :**

The information contained herein is accurate to the best knowledge and belief of Campo Research Pte Ltd, and specification quoted may change without prior notice. Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, Campo Research Pte Ltd, however, cannot assume any liabilities or risks involved in the use of its natural products or their derivatives or raw materials or ingredients, since the conditions of use are beyond Campo Research Pte Ltd' s control. Statements concerning the possible use are not intended as recommendations to use our materials in the infringement of any patents or infringements of mandatory regulatory requirements or without any safety evaluations conducted when used in combination with materials of other suppliers.. We make no warranty of any kind, expressed or implied, other than that the material conforms to the applicable standard specifications. Campo Research Pte Ltd accepts no liabilities of whatsoever either expressed or as otherwise arising out of the information supplied, the application, adaptation or processing of the products described herein, or the use of other materials in lieu of the Campo materials or the use of Campo raw materials or ingredients in conjunction with any other products and raw materials. The use of Campo Research Pte Ltd's raw materials or ingredients in any formulations are to be compulsory tested and to be assayed for safety and toxicology profiles evaluations and according the mandatory regulations as required by the laws and regulations of the countries where the evaluation and use of Campo Research Pte Ltd's raw materials or ingredients has been formulated as single components in any carrier systems or as in multi-components formularies. The end-users, marketers; manufacturers, formulation laboratories or importers of Campo Research Pte Ltd' raw materials and ingredients which are incorporated into any formularies as formulated or re-sold or re-exported or assayed in accordance with any mandatory regulatory requirements of any country or infringement of any patents assume all liabilities as that may arise out of the use of Campo Research Pte Ltd's raw materials and ingredients in any formularies in combination with raw materials and ingredients of other suppliers or as single components in any carriers. The definition of users as mentioned in these instances are manufacturers, marketers, formulation laboratories, consultants, and importers assumed all liabilities arising as either personal injuries suits, infringements of patents suits, infringements of or failures to meet regulatory requirements suits of a formulary either as single components in any carrier systems or in as multi-components formularies in which are may consist of a Campo Research Pte Ltd's raw material or ingredients.

***IMPORTANT NOTICE***

Specifications may change without prior notice. Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, however, cannot assume any liability or risk involved in the use of its natural products or their derivatives, since the conditions of use are beyond our control. Statements concerning the possible use are not intended as recommendations to use our products in the infringement of any patent. We make no warranty of any kind; expressed or implied, other than that the material conforms to the applicable standard specifications.