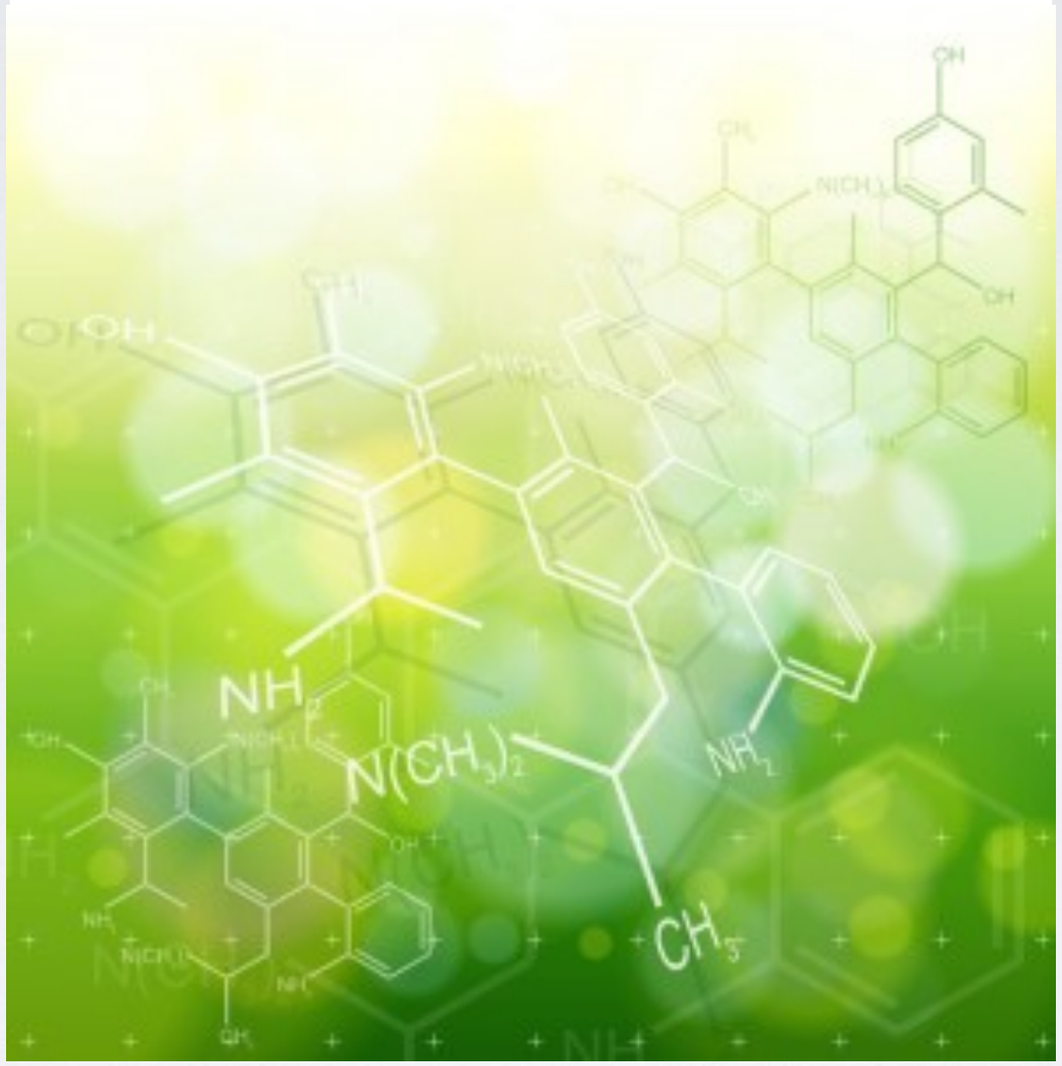

PROPOLAIR

PROPOLAIR

Kontak was founded in 1990 by the genius of Luigi Fabretto, inventor of the propolis diffusers innovation in the exploitation of this valuable natural substance

Over the years Kontak has the attention of audiences with a range of environmental speakers pure propolis, proposing different models for design and functionality

More than 100000 speakers sold on the Italian market

Expansion in the international market, Australia, Germany, USA, Japan, Switzerland, Austria, France, Greece, Poland, Hungary and Malta are the countries where the company operates today.

The continuous scientific research and field trials have determined the validity and reliability of the system Propolair business with the use of raw materials of the highest quality.

The only manufacturer and distributor of the line Propolit, the only Italian organic propolis on the market

Línea Propolair

Collaborations and Research

Kontak always engages in the research and development of science.
More than 150 medical staff direct-indirect
200 experts involved
Partnerships with hospitals, universities, research centers.

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chem
Laboratori di Analisi Chimiche, Chimico-fisiche e Microbiologiche
Servizi per l'Ambiente

Regione Piemonte
Azienda Sanitaria Locale 5

Politecnico di Torino
Sede di Alessandria

CAMERA DI COMMERCIO INDUSTRIA, ARTIGIANATO E AGRICOLTURA DI TRIESTE

LABORATORIO CHIMICO
CAMERA DI COMMERCIO TORINO

Università degli studi di Torino
FACOLTÀ DI AGRARIA

Università degli Studi di Torino

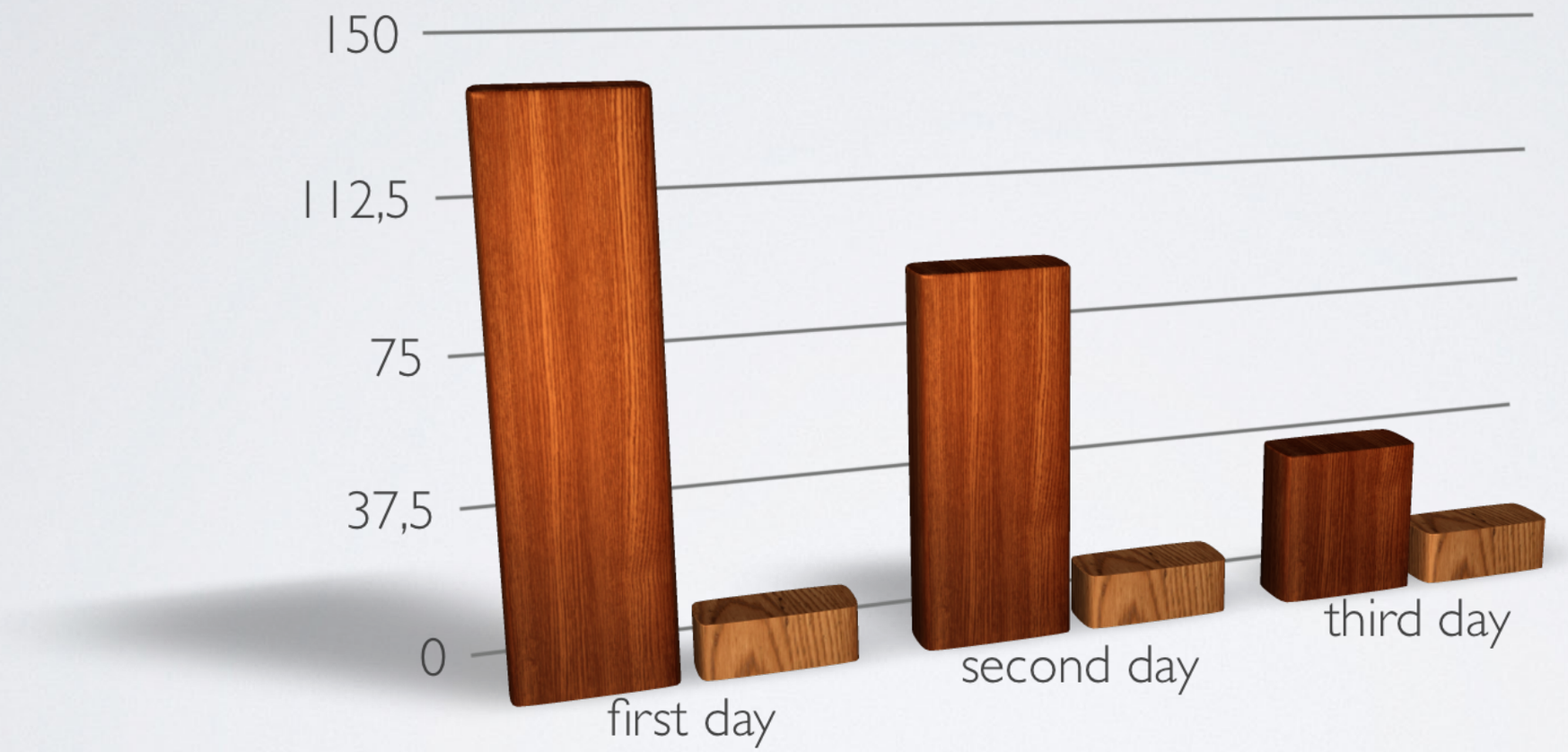
POLITECNICO DI TORINO 1859

Dr. Graner & Partner GmbH
Labor für analytische und pharmazeutische Chemie
Sachverständigenbüro

UNIMORE
UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA

Scientific Studies

STUDY OF ASL 5 COLLEGNO ON SANITATION
MICROBIAL IN A CLASSROOM SCHOOL (Biologi.Italiani February '96)



Using for 3 consecutive days the diffusers in to the schools and after to have analyzed the Air before and after the experimentation, some comments can be made on the antibacterial activity of sesquiterpenes.

Utilizing Propolair diffusers there was a strong microbial load reduction (71,8% in 3 days).

Scientific Studies

RESEARCH AT NURSERY

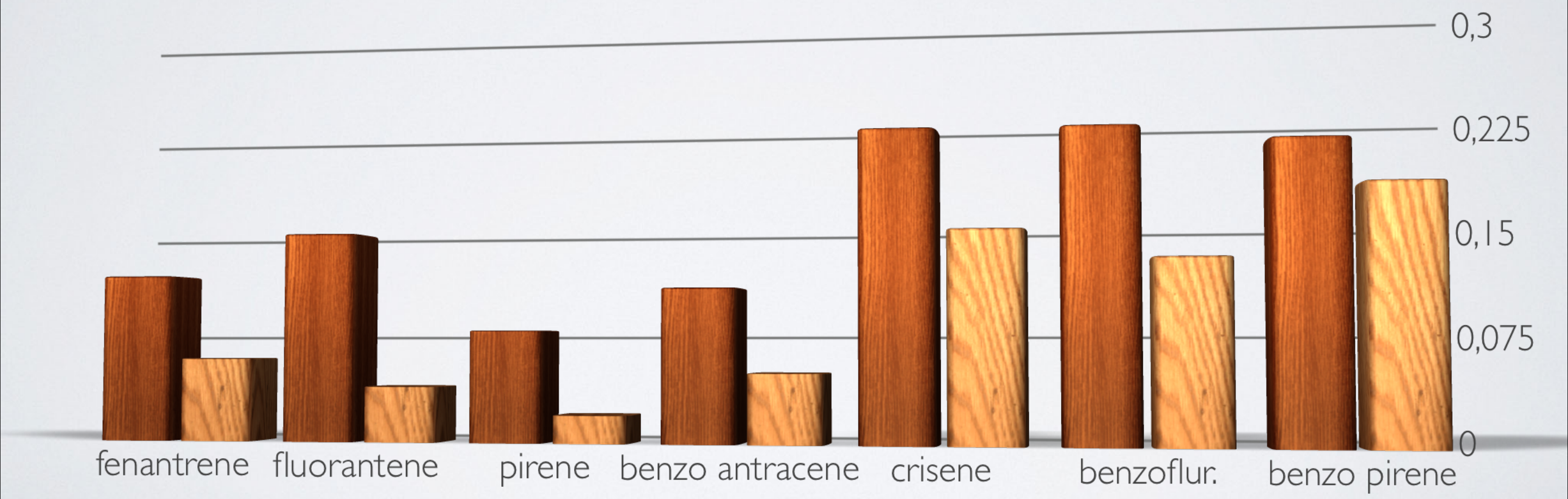
increase in the presence of children in the classroom

An experiment was carried in kindergarten in Milan, Associazione Casa Materna of Milan where, using Propolair diffusers in the rooms where the childrens sleep, the frequency of children in school has increased by 62.1%

Scientific Studies

Reduction Benzene and Polycyclic aromatic hydrocarbons of the exhaust gases of cars

A study carried by the Laboratory of the Chamber of Commerce of Turin, has shown that with the use of Propolair Diffusers has obtained an abatement up to 82% of Pyrene and Fluoranthene, waste substances from the combustion of fuels for cars, defined by the OMS as carcinogens.
The abatement of Benzene is the result of 15%.



Allegato n.2

Contenuto di acidi fenolici e flavonoidi determinato in estratti di propoli commerciali mediante HPLC-DAD (i dati sono espressi in mg/mL)[a]

Numero picco	Nome composto	t_R (min)	Kontak	Aboca	Esi	Specchiasol	Biosline
1	Acido caffeico	1.72	**0.80±0.01**	<LOD	<LOD	0.03	<LOD
2	Acido *p*-cumarico	2.59	**0.55**[b]	<LOQ	<LOD	0.05	<LOD
3	Acido ferulico	3.04	**0.83**[b]	<LOD	<LOD	<LOD	<LOD
4	Acido isoferulico	3.35	0.37±0.01	0.11[b]	**0.82**[b]	**0.82±0.01**	0.09[b]
5	Acido 3,4-dimetil-caffeico (DMCA)	7.10	1.08±0.02	0.21±0.01	1.02±0.01	**1.36±0.01**	0.14[b]
6	Acido cinnamico[c]	10.25	0.10±0.01	0.08[b]	0.77[b]	**0.98**[b]	0.07[b]
7	Pinobanksina-5-metiletere[c]	10.34	**2.16±0.02**	<LOD	<LOD	<LOD	<LOD
8	Pinobanksina	12.90	1.10±0.01	0.13[b]	**1.57±0.02**	1.15±0.02	0.07[b]
9	Acido cinnamilidenacetico	17.17	**0.84±0.01**	0.09[b]	0.60[b]	0.62[b]	0.05[b]
10	Acido caffeico prenil estere	23.19	1.24[b]	0.09±0.01	0.17[b]	**1.77±0.01**	0.05[b]
11	Crisina	23.70	**3.83±0.02**	0.70±0.03	3.80±0.01	3.50±0.01	0.23[b]
12	Acido caffeico benzil estere	24.37	**1.88±0.05**	<LOD	<LOD	0.23[b]	<LOD
13	Acido caffeico prenil estere	24.79	**1.15±0.02**	<LOD	<LOD	0.89[b]	<LOD
14	Pinocembrina	25.47	4.25±0.05	0.64±0.02	4.13±0.01	**4.56±0.02**	0.29±0.01
15	Galangina	26.59	2.72±0.02	0.81±0.03	5.81±0.03	**4.18±0.01**	0.30±0.01
16	Pinobanksina-3-acetato	28.32	**4.06±0.04**	0.32±0.02	<LOD	2.74±0.01	<LOD
17	Acido caffeico feniletil estere (CAPE)	29.90	**1.26±0.03**	0.04[b]	<LOD	0.32[b]	<LOD
18	Acido caffeico cinnamil estere	36.73	**3.34±0.06**	0.17±0.01	1.04±0.03	0.96±0.02	0.13[b]
19	Pinobanksin-3-butirrato[d]	46.34	1.99±0.09	0.38±0.01	**2.04±0.04**	1.15±0.02	0.12[b]
20	Pinobanksin-3-pentanoato[d]	51.06	**0.75±0.02**	0.06[b]	0.32[b]	0.25[b]	<LOD
-	Acidi fenolici totali	-	**9.05±0.13**	0.57±0.01	3.06±0.04	6.02±0.02	0.41±0.01
-	Flavoni totali	-	**3.83±0.02**	0.70±0.03	3.80±0.01	3.50±0.01	0.23[b]
-	Flavonoli totali	-	2.72±0.02	0.81±0.03	**5.81±0.03**	4.18±0.01	0.30±0.01
-	Flavanoni totali	-	4.25±0.05	0.64±0.02	4.13±0.01	**4.56±0.02**	0.29±0.01
-	Diidroflavonoli totali	-	**10.05±0.16**	0.89±0.03	3.93±0.04	5.28±0.04	0.19[b]
-	Flavonoidi totali	-	**20.85±0.23**	3.04±0.10	17.68±0.04	17.52±0.06	1.00±0.02
-	Acidi fenolici totali	-	**29.90±0.34**	3.61±0.11	20.74±0.04	23.54±0.06	1.41±0.02

[a] I dati sono espresso come media ($n = 3$) ± SD.
[b] SD < 0.005.
[c] I picchi sono sovrapposti. L'integrazione del picco è stata sperimentalmente effettuata seguendo gli spettri UV-Vis degli analiti.
[d] O isomeri posizionali.

Acido Ferulico:

Aboca/Esi/Specchiasol /Biosline: **ASSENTE**

Kontak : 0,83

Ferulic acid was initially used in the studies of biochemistry and immunology to understand the metabolism of arachidonic acid branch that leads to the synthesis of leukotrienes.
These biological derivatives are potent mediators of inflammatory reactions and have some activity 'in the symptoms of bronchial asthma. Based on these studies it was possible to synthesize derivatives much more powerful results that are truly effective in controlling asthma attacks.

Ferulic Acid: b Potential Through Its Antioxidant Property
Marimuthu Srinivasan, Adluri R. Sudheer, and Venugopal P. Menon*

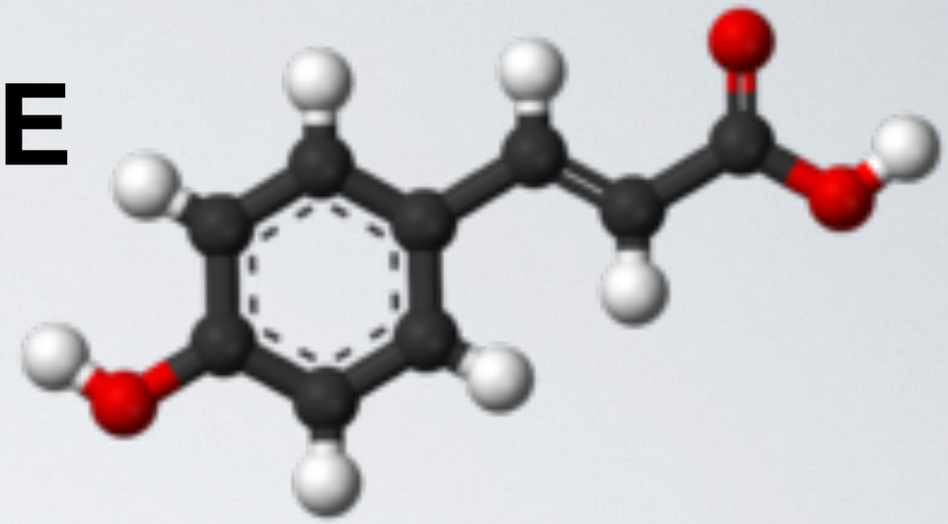
J Clin Biochem Nutr. 2007 March; 40(2): 92–100. Published online 2007 March 14. doi: 10.3164/jcbn.40.92
PMCID: PMC2127228

<u>Acido Cumarico</u>:

Aboca/Esi/Biosline: **ASSENTE**

Specchiasol: 0,05

<u>Kontak : 0,55</u>



Medicinal uses

p-**Coumaric acid** has **antioxidant properties and is believed to reduce the risk of stomach cancer**[7] by reducing the formation of carcinogenic nitrosamines.[8]

[7] Ferguson LR, Shuo-tun Z, Harris PJ (2005). "Antioxidant and antigenotoxic effects of plant cell wall hydroxycinnamic acids in cultured HT-29". Molecular Nutrition & Food Research 49 (6): 585–693. doi: 10.1002/mnfr.200500014. PMID 15841493.

[8] Kikugawa K, Hakamada T, Hasunuma M, Kurechi T (1983). "Reaction of p-hydroxycinnamic acid derivatives with nitrite and its relevance to nitrosamine formation". Journal of Agricultural and Food Chemistry 1 (4): 780–785. doi:10.1021/jf00118a025.

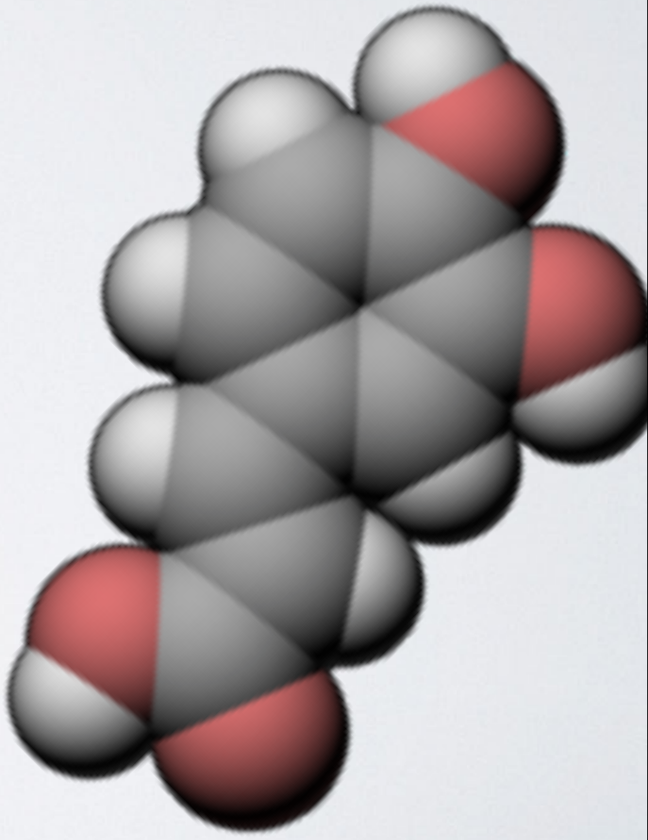
Acido caffeico

Aboca, Esi, Blosline: ASSENTE

Specchiasol : 0,03

KONTAK : 0,80

The caffeic acid is an aromatic carboxylic acid.
So called because it was originally found in the extracts of coffee, it was subsequently found widely in nature. As such, and derivative (caffeic acid / chlorogenic) is present nell'angelica, nell'arnica in burdock, in the flue, in melissa and high percentages in propolis quality '.
As such it has antibiotic properties towards certain intestinal pathogens. It has weak anti-inflammatory effect and is shown to inhibit the enzyme xanthine oxidase, which converts xanthine into uric acid, gout responsible for the phenomena when excessively present in the tissues.



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The results confirm that Propolit of Kontak is:
- More rich in phenolic acids Total *
- More rich in flavonoids *
* Compared to the propolis Aboca, Specchiasol, Esi and Biosline

Flavonoidi totali	-	**20.85±0.23**	3.04±0.10	17.68±0.04	17.52±0.06	1.00±0.02
Acidi fenolici totali	-	**29.90±0.34**	3.61±0.11	20.74±0.04	23.54±0.06	1.41±0.02
		kontak	Aboca	ESI	Specchiasol	BiosLine

Field Experience

Prof. Matteo Bevilacqua Respiratory Physiopathology Service, Hospital of Padua (Italy)
Prof. Luciano Pecchiai Head Pathologist in "Vittore Buzzi" Children Hospital of Milano (Italy)

To Take Care of Health with propolis (Prof. Luciano Pecchiai – Milano (Italy)

I made my personal experience using **Propolair** with 200 patience with respiratoy disease, like rhinitis,sinusitis, bronchitises, tuss and sometimes asthma. In each case we obtained a reduction of sintomatologies and an improvement of disease course, and a reduction of the fever when it was present.

We obtained the best results in children with recurrent form of faringitises and tonsillitises from streptococcobetaemholitics.

Prevention and therapy for respiratory diseases. (Prof. Matteo Bevilacqua – Padua (Italy)

Propolair finds its most natural use in respiratory medicine because it allows all these active substances to reach the whole surface of the respiratory tree at its best, starting from the nose and the mouth, down to all the ventilated alveoli, at its main concentration, beating the enemy on the spot and avoiding diseases of the organism.

Propolair is specially fit for the prophylaxis and therapy of respiratory acute and chronic diseases which present allergies, inflammation, bacteria, viruses and fungae, such as: rhinits, sinusitis, tonsillitis, pharyngitis, laryngitis, mycosis of the throat, bronchial asthma, asthmatic bronchitis, chronic obstructive bronchopneumopathie.

The ionizator and the fan placed inside the Propolair highly increase the effectiveness of the inhaling system.

Scientific Studies

R.T. min.	Component	n.1	n.2	n.3	n.4	n.5	n.6
7,71	Benzil alcohol	x	x	x	x	x	x
8,48	n-undecane	o	o	o	x	x	x
8,54	linalool	x	o	o	o	o	o
8,61	Nonanal	x	x	x	x	x	x
8,90	Phenyl ethyl alcohol	x	x	x	x	x	x
9,54	Benzyl acetate	o	o	o	x	x	x
10,15	Decanal	x	o	o	o	o	o
10,41	Beta-ciclocitral	x	o	o	o	o	o
10,88	Phenethyl acetate	o	o	o	x	x	x
12,60	Alpha copaene	x	o	o	o	o	o
13,48	Cinnamyl acetate	o	o	o	x	x	x
13,74	Alloaromadendrene	x	o	o	o	o	o
13,88	Alpha amorphene	x	o	o	o	o	o
14,10	Beta selinene	o	x	x	x	x	x
14,11	(+) aromadendrene	x	o	o	o	o	o
14,15	Alpha selinene	o	o	o	x	x	x
14,18	Alpha muurolene	x	x	x	o	o	o
14,38	Gamma cadinene	x	x	x	x	x	x
14,42	Delta cadinene	x	x	x	x	x	x
14,48	1s,cis calamenene	x	x	x	x	x	x
14,68	Valencene	o	o	o	x	x	x
14,74	Alpha colacorene	x	x	x	x	x	x
15,77	Cadina-1,4-diene	x	x	x	x	o	o
15,83	10-epi- gamma-eudesmol	x	x	x	x	x	x
15,87	(-) aristolene	x	x	x	x	o	o
16,02	Alpha-copaene-11-ol	x	x	x	x	o	o
16,13	Beta-eudesmol	x	x	x	x	x	x
17,39	Bemzyl benzoate	x	x	x	x	x	x
18,45	Benzyl salycilate	o	o	o	o	x	o
18,52	n-nonadecane (c19)	o	o	x	x	x	x
19,51	Eicosane (c20)	o	o	o	x	x	o
20,27	Linoleic acid	o	o	o	x	x	o
20,46	n-heneicosane (c21)	o	o	o	x	x	x
20,69	Benzyl cinnammate	o	o	x	x	x	x
22,02	9-tricosene	o	o	o	x	x	x
22,23	N tricosane (c23)	o	o	o	x	x	x
23,87	Idrocarburo	o	o	o	x	x	x
25,41	idrocarburo	o	o	o	x	x	x

Legend:
R.T. min= gas chromatographical retention time
x= detected compount
o= non-detected compound

A chemical analysis was carried out by us in order to determine the main components of the volatile fraction of **propolis** released into the atmosphere by **PROPOLAIR**.
The identified components have been assembled into the following table.

A research, whose data were extracted from **Medline** scientific data bank, has analyzed these components one by one. (see scientific bibliography in website: www.propolair.com)

EXAMPLE:
BENZYL ALCOHOL (present in all cycle of capsula propolair), demonstred an antifungingal activity
NONANAL (also present in all cycle), showed a strong activity against Staphylococcus aureus, Klebsiella Pneumoniae and Escherichia Coli.
LINALOOL (present just in the first 24h of capsula propoliar) demonstred very strong antibacterial activity

For each compound the data indicate its therapeutic validity and property together with the scientific experimentations carried out on it.