



Features

Standardized

- A proprietary extract of hops cones with a specific content of alpha acids
- Designed to be virtually free of phytoestrogenic and sleep inducing compounds

Researched

- Documented multiple mechanisms of action in human *in vitro* and *in vivo* studies
- The subject of extensive ongoing research and human clinical studies

Safe & Effective

- A GI friendly alternative for the temporary relief of minor everyday aches and pains
- Supports joint health and mobility
- Well tolerated and absorbed
- Fast acting

Versatile

- Anti-inflammatory
- Anti-oxidative
- Bone resorption inhibitive



Perluxan®
www.perluxan.com
1-866-963-2007
info@perluxan.com



Media Contact:
Tom McCartney
1-412-361-5178
tmcom@verizon.net
Download the Media Kit
at www.perluxan.com/contact

© 2008 Pharmachem Laboratories, Inc.
Perluxan® is a registered trademark of Pharmachem Laboratories.

The statements in this document have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.

Product Data Sheet

Product	Perluxan® SD	
Botanical Name	<i>Humulus lupulus</i> L.	
Plant Part Used	Cones	
Extraction	Supercritical carbon dioxide	
Carriers	Maltodextrin, food starch, silica	
Content (HPLC)	NLT 30% alpha acids (humulone, cohumulone, adhumulone, iso-cohumulone and iso-adhumulone)	
	NMT 10% beta acids (lupulone, colupulone)	
Appearance	Free-flowing powder	
Color	Light green to yellow	
Aroma	Sweet	
Taste	Bitter	
Delivery	Tablets, capsules	
Total Plate Count	LT 10,000 CFU/g	
Yeast & Mold	LT 100 CFU/g	
Salmonella	negative	
E. coli	negative	
Staphylococcus aureus	negative	
Pseudomonas aeruginosa	negative	
Heavy Metals	As	<0.1ppm
	Cd	<0.1ppm
	Cs	<0.1 ppm
	Pb	<0.5ppm
	Hg	<0.1ppm

Non-GMO / Free of milk, egg, fish, shellfish, tree nuts, peanuts, wheat/gluten and soy
Hops (*Humulus lupulus* L.) is GRAS as a food ingredient (21 CFR 182.20)
U.S. Patent Nos. 7,144,590, 7,279,186, 5,604,263 and patents pending
Grown and made in the USA

Introduction

The female flower cone of the hops plant (*Humulus lupulus* L.), a climbing vine native to North America, Europe and Asia, is primarily used to add flavor to beer. Numerous cultivars of hops are selectively utilized by brewers to balance the sweetness of malt with bitterness, adding flowery, fruity and herbal aromas. The first cultivation of hops was documented in 736 and hops was introduced to the US in 1629. Today's leading production centers in North America include the Yakima Valley in Washington and Willamette Valley in Oregon.



Figure 1: hops cultivation (left), Mt. Hood cone (middle) and production (right)

Hops contains a spectrum of bioactive ingredients with numerous traditional therapeutic applications, including the treatment of anxiety and insomnia due its mild sedative and relaxing effects, and its use during menopause for its high phytoestrogen content. However, it was not until recently that the anti-inflammatory activity of certain hops fractions, primarily derived from resinous extracts, was discovered. The so called alpha acids, isolated and enriched by state-of-the-art supercritical carbon dioxide extraction technology, have shown great potential in helping to support the body's natural response to inflammation.



Perluxe®
www.perluxan.com
1-866-963-2007
info@perluxe.com



Media Contact:
Tom McCartney
1-412-361-5178
tmcom@verizon.net
Download the Media Kit
at www.perluxan.com/contact

© 2008 Pharmachem Laboratories, Inc.
Perluxe® is a registered trademark of Pharmachem Laboratories.

The statements in this document have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.

The Search for a Botanical Alternative to Improve Joint Health

During the late 1990's, a handful of research companies began looking for natural ways to improve joint health and ease minor pain. Extensive literature reviews of 230 botanicals yielded about 20 candidates for proof-of-principle studies (*in vitro* IC₅₀ and IC₈₀ tests) to investigate their potential of eventually becoming a natural, efficacious alternative.

Of those 20 prospects, one ingredient was identified as having the highest chance of success. This ingredient, a standardized extract of hops previously known for its antioxidant properties, was subsequently tested at the respected William Harvey Institute in the UK using the gold-standard William Harvey Whole Blood Assay. The powdered extract used in the research was specifically designed to contain high amounts of naturally occurring alpha acids and was characterized by a good solubility and bioavailability (measured in CACO-2 cell lines) when compared to the other botanicals. The extract was also made to be virtually free of both phytoestrogens and sleep-inducing compounds, to maximize its safety and efficacy in joint health.

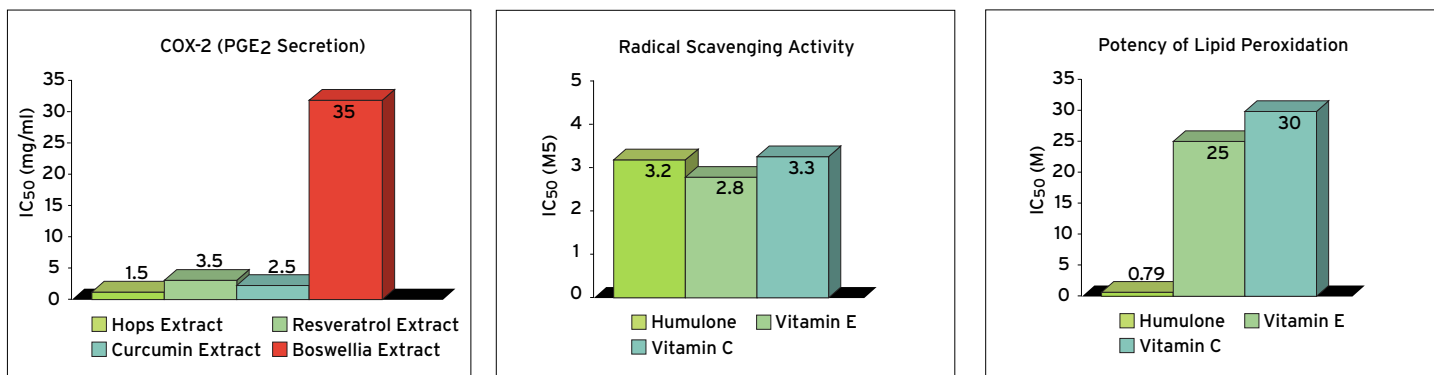


Figure 2: COX-2 selectivity (left) and high radical scavenging (middle) and outstanding lipid peroxidation protecting (right) activity of Humulone.

Note: The IC₅₀ values represent the concentration required to produce 50% inhibition of the corresponding activity. The lower the IC₅₀ value for the activity, the less of the corresponding extract required to inhibit and the higher its potency.

After convincingly passing these crucial milestones and revealing its mechanism-of-action, the hops extract was subsequently put to the only true test, a placebo controlled clinical trial to investigate its effect on joint discomfort in human subjects.

The Effect of a Standardized Extract of Hops in Humans

The effect of a standardized supercritical carbon dioxide hops extract containing 30% alpha acids (Perluxan®) on individuals with knee pain was investigated in a randomized, double-blind, placebo-controlled study.

Thirty six (36) individuals ingested either placebo or Perluxan® in capsule form, and the effect of the ingredient to improve pain relief after 14 days of supplementation (posttest) was measured by WOMAC (symptom assessment questionnaire) and compared to starting values (pretest). The WOMAC is a validated instrument designed specifically for the assessment of lower extremity pain and function in the knee or hip and is a reliable and sensitive instrument for the detection of clinically important changes in health status. This study investigated pain severity scores during everyday activities such as Walking on a Flat Surface, Up and Down Stairs, While in Bed, Sitting or Lying and Standing Upright.

The subjects' ages ranged from 39 to 74 years; the average age was 57 years. The majority of subjects were Caucasian (92%) and female (78%). The critical success factor for treatment of pain was a self-determined fast acting pain relieving effect of the product to motivate the individual to continuously take the supplement.

Perluxan® intake showed a fast acting effect on mean pain relief and significant improvement over placebo could be measured after only two (2) hours following the first dose. By the end of the second week, it was clear that Perluxan® helped to relieve minor pain during normal daily activities and may have improved joint mobility in the active group.



Perluxan®
www.perluxan.com
1-866-963-2007
info@perluxan.com

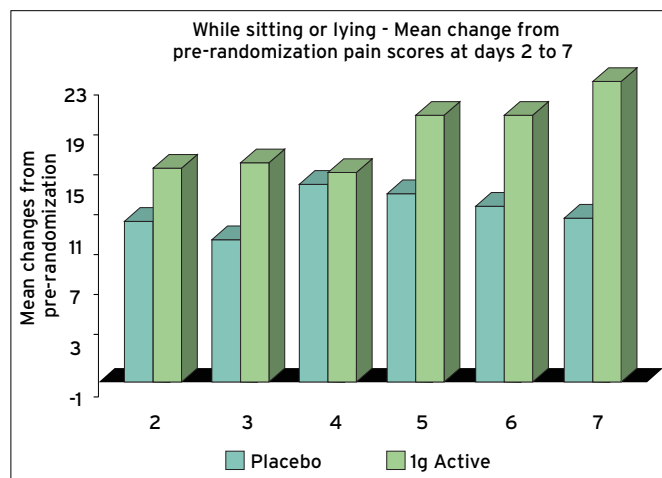
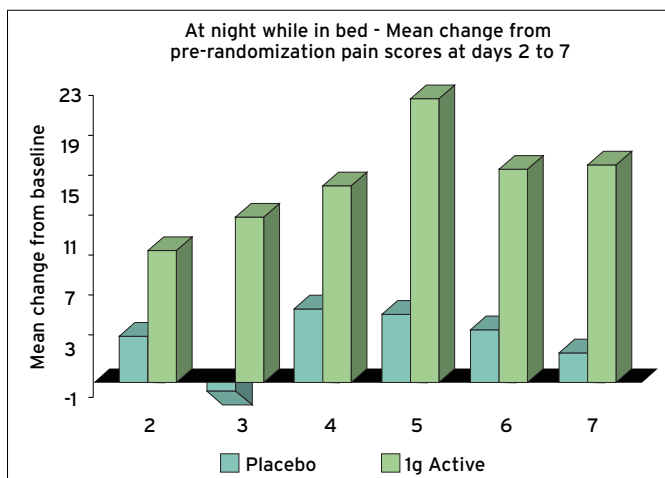
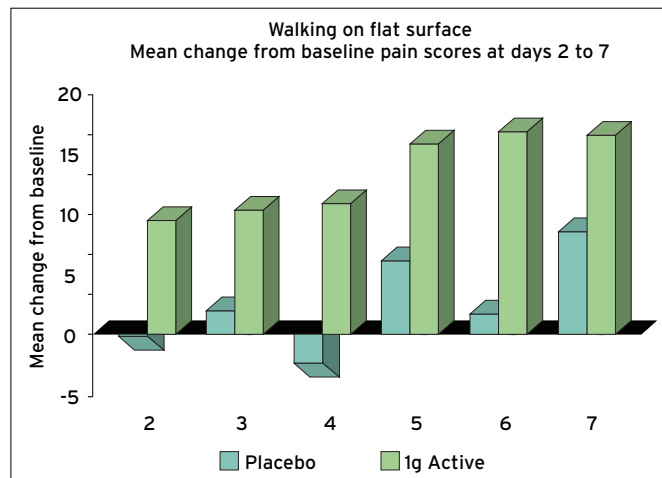
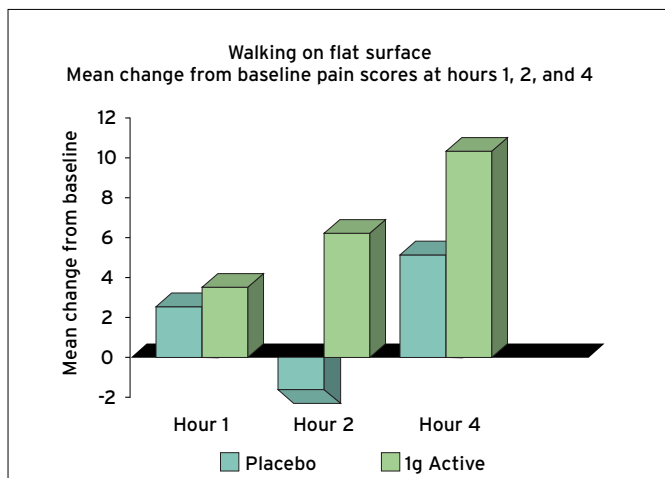


Media Contact:
Tom McCartney
1-412-361-5178
tmcom@verizon.net
Download the Media Kit
at www.perluxan.com/contact

© 2008 Pharmachem Laboratories, Inc.
Perluxan® is a registered trademark of Pharmachem Laboratories.

The statements in this document have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.

Pain Relief During Everyday Activities



It was concluded that 14 days of oral Perluxan® supplementation significantly improved parameters of knee pain and everyday discomfort. The effectiveness of Perluxan® was also supported by the extremely limited use of rescue medication in the treatment groups in comparison to placebo. The comparison of pre- and post-supplementation blood work and the adverse side effect monitoring also showed that Perluxan® was well-tolerated and lead to no gastrointestinal discomfort.

To learn more about the fascinating history of hops, the anti-inflammatory effect of Perluxan® and the scientific data supporting the proposed mechanisms-of-action, please contact Pharmachem Labs.