





STEFES Ingredients GmbH

is your reliable partner for raw materials for

-  Nutraceutical
-  Food/Beverages
-  Pet Food/Nutrition
-  Cosmetics

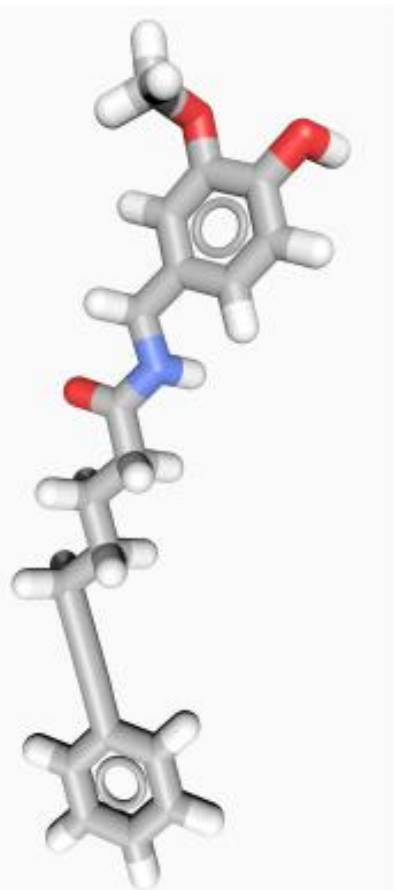


axivite

A new proprietary analogue of Capsaicin



**„The innovative bridge between
nature and a healthier life!“**



axivite

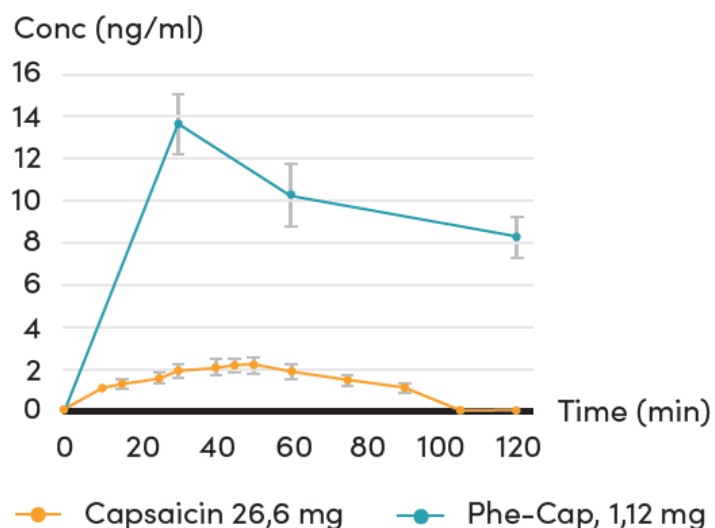
- based on an innovative molecule „Phenylcapsaicin“ which is an analog to Capsaicin
- globally patented
- proprietary molecule where a natural phenyl group has been used to stabilize nature identical capsaicin
- GRAS in the US and approved as Novel Food in EU as per Oct. 2019





High bioavailability

Pharmacokinetic study of the effect of Capsaicin



Five grams of capsicum providing 26.6 milligram of capsaicin : "Pharmacokinetic and The Effect of Capsaicin in Capsicum frutescens on Decreasing Plasma Glucose Level Kamon Chaiyasit MSc*, Weerapan Khovidhunkit MD, PhD**, Supeechea Wittayalertpanya MSc**"

Clinical Trial Dose of 1,12mg BID of PheCap/aXivite: "Effects of Phenyl-Capsaicin on Weight Loss and Body Composition, Tim N. Ziegenfuss, Ph.D., CSCS"

Pharmacokinetic Study Following o. d. and b. i. d Oral Dosing of Phenylcapsaicin to Healthy Human Subjects



Bioenhancement effect

A comparative study on the relative uptake of Capsaicin, Phenylcapsaicin and Curcumin in single and combination formulation using a Caco-2 in vitro cell.

Bioenhancement effect of aXivite®

Treatment	Dilution	Curcumin Apical 0h ug/well	Curcumin Apical 2h ug/well	Curcumin Basal 2h ug/well
Cap+Cur 001	1:1	123,3	99,5 ^a	22,4 ^a
Cap+Cur 002	1:1	12	9,2 ^b	2,7 ^a
Cap+Cur 003	1:1	1,2	0,8	0,3
Phecap+Cur 001	1:1	122,4	77,1 ^{a/c}	43,9
Phecap+Cur 002	1:1	12,3	7,4 ^{b/d}	4,8
Phecap+Cur 003	1:1	1,3	0,6 ^c	0,6

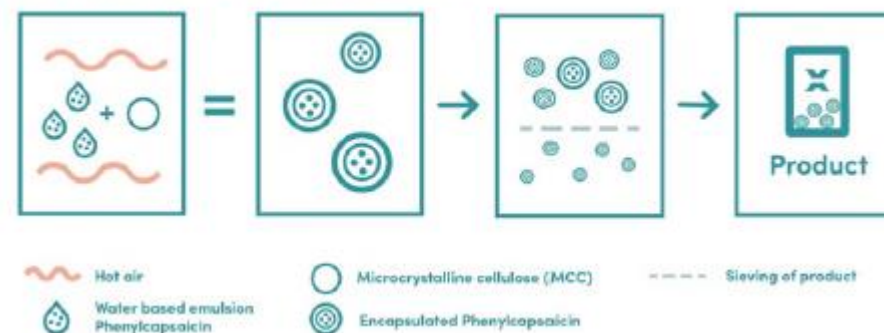
The presence of Phenylcapsaicin increased the uptake of Curcumin at all three dose levels even as compared to the Capsaicin + Curcumin formulation ($P < 0.05$) (CACO in vitro study).

Pungency control

To control the pungency, aXichem has developed a unique microencapsulation, engineered for specific release.

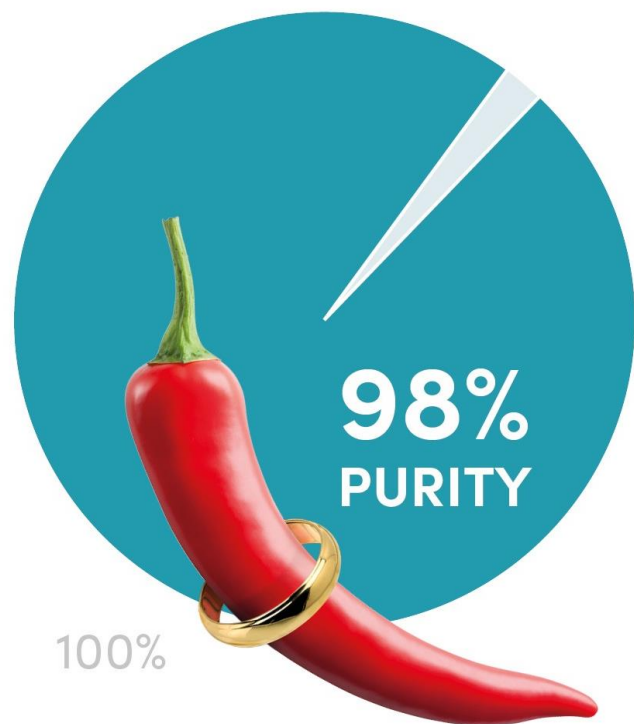


aXivite® process description



- 1) The core material microcrystalline cellulose (MCC) particles is fluidized by hot air.
- 2) A waterbased emulsion of a Phenylcapsaicin containing matrix is sprayed onto the MCC. The hot air evaporates the water from the emulsion and leaves a phenylcapsaicin containing matrix coating on the MCC particles.
- 3) Oversized particles are sieved and removed.
- 4) Particles are packaged into ready product.

Pure efficiency



- Phenylcapsaicin has a purity of 98 % making aXivite® easy to handle with 1% formulation in powder form.
- It is stable in production with a high bioavailable making it very potent.
- Because of its higher efficiency regarding uptake, you also need a much lower dosage.
- It is better suited for industrial production compared to natural capsaicin, due to higher purity, reliability and the lower price.



Higher safety

The unique microencapsulated active ingredient at 1 % concentration, also serves as an easy to handle food additive which can be further developed into a finished product.

According to several tests, Phenylcapsaicin shows no sign of genotoxicity, whereas high dosage of natural pure capsaicin can be toxic.



Benefits

- higher bioavailability
- less pungent
- safe for long time use
- increase and boost metabolism
- stable and easy to handle
- suited for industrial production
- bioenhancer
- gut health
- weight control



Nature inspired
Human made

SUMMARY

The health benefits of chili with its active ingredient capsaicin have been known for centuries. Just as chili is also known for being hot and not so easily consumed.

aXivite®, combines the naturally occurring phenyl group with capsaicin, resulting in the innovative natural analogue capsaicin with a high purity and a greatly reduced pungency. Due to the high bioavailability of aXivite® only low dosages are needed. aXivite® is easy to handle in its 1 % formulation in powder form and stable in production.

Capsaicin consumption can reduce body weight and has the potential to treat obesity.

Recognized as a bioenhancer, its bioavailability is more than 4 times higher than natural capsaicin.

aXivite® can be used in a variety of new applications as well as a more effective and safer alternative to naturally extracted capsaicin.

axiChem

STEFES 
INGREDIENTS

axivite

Great potentials with pure benefits



Quality, Service as well as a Long-Term Relationship with our Customers, Partners and Suppliers are our Highest Priority