

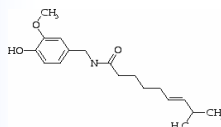
High purification of capsaïcine from crude Hot pepper extract on Analytical FCPC® with 50 ml column

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Introduction

Capsaicinoids is the name given to the class of compounds found in members of the capsicum family of plants.

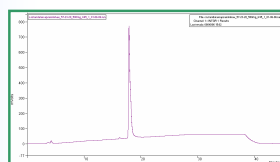
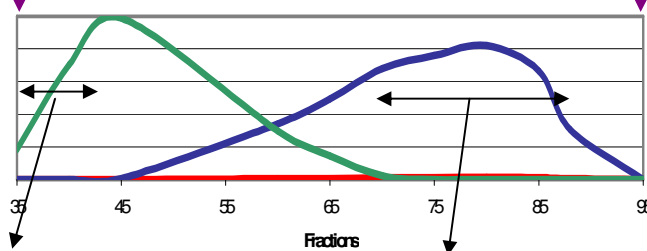
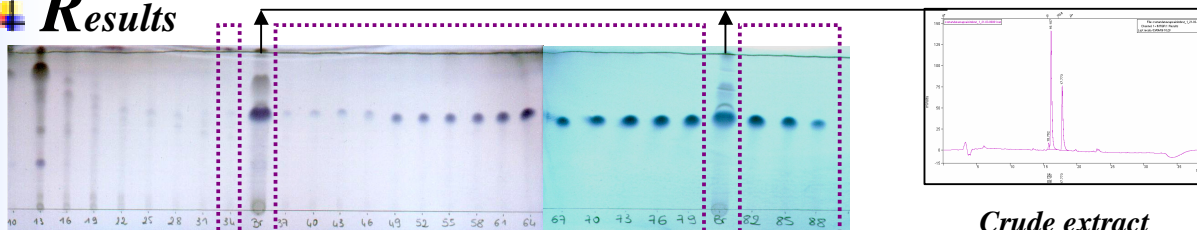
The most common of these compounds is N-Vanillyl-8-methyl-6-(E)-nonamide, or capsaicin ($C_{18}H_{27}NO_3$). It is a crystalline pungent substance used today in creams for the temporary relief of minor aches, pains of muscles and joints associated with arthritis, simple backache, strains and sprains.



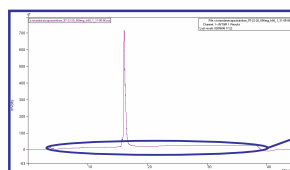
The Analytical FCPC®50 is used to purify capsaicin from 500 mg of oleoresin extracted from hot pepper (*Capsicum annuum*). Fractions analysis are done with TLC on silica gel 60 with fluorescent indicator UV 254 nm and vanillin sulphuric, and HPLC on C18 column at 280 nm.



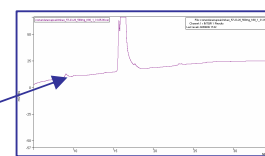
Results



Dihydrocapsaicin



Capsaicin



Nordihydrocapsaicin

Technical Parameters	
Flow-rate	6 ml/mn
Rotation speed	1600 rpm
Quantity injected	500 mg in 2 ml

Results	
Separation time	45 min
Solvent consumption	400 ml
Compound purity	98.5%

Conclusions

The Analytical FCPC® 50 allows very fast separation of capsaicin and dihydrocapsaicin from 1 gr of a natural complex extract of *Capsicum annuum*, with purity higher than 98,5 % in one step and low solvent consumption.

Moreover, this purification can be easily scale up to 200 ml, 1 and 5 L instrument for production.

