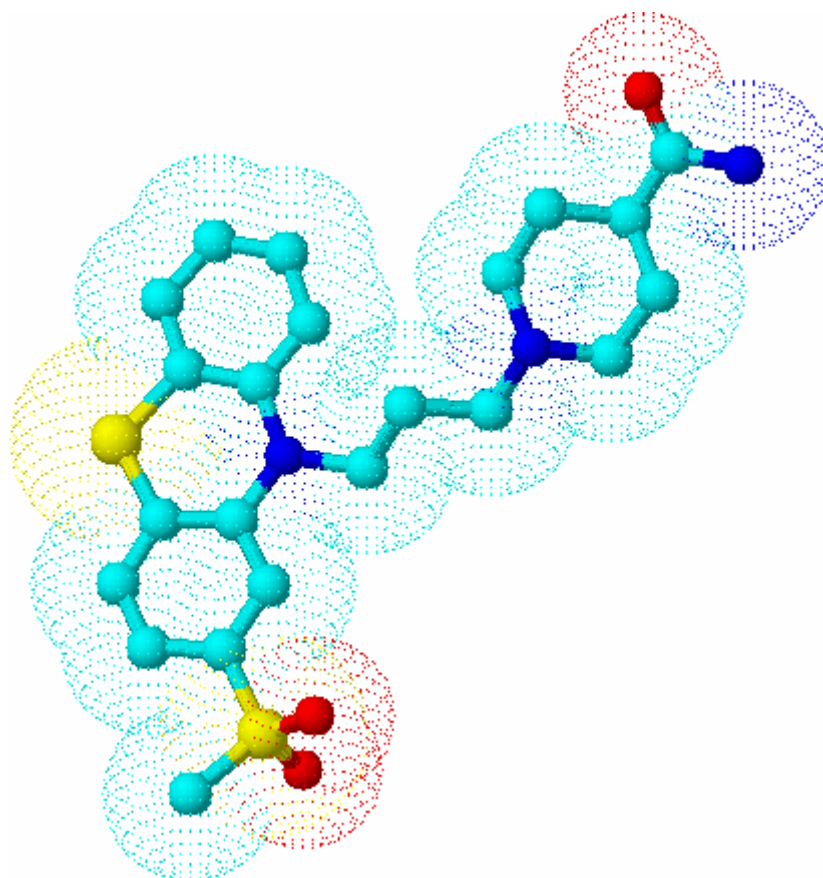


AraChem

Custom Synthesis



Metopimazine
1-[3-(2-Methylsulfonylphenothiazin-10-yl)propyl]
piperidine-4-carboxamide

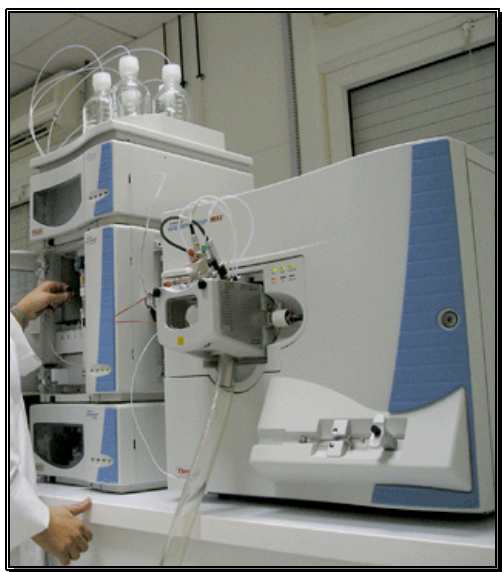
Making Chemistry Yours

www.arachem.nl

AraChem-Synthesis is a division of AraChem Contract Research & Custom Synthesis.

Our experience in the field of organic synthesis and catalysis, backed up by the large expertise of the members of our scientific board/network, allow us to respond and satisfy consistently your specific requirements.

AraChem-Synthesis offers dedicated customer-oriented synthesis/manufacturing services at gram scale as well as kilogram scale on an exclusive basis. We are committed to confidentiality, reliability and delivery of quality products. Also we can deliver different reagents, key intermediates and catalysts from catalogue to the pharmaceutical and fine chemicals industry.



Benchtop LC/MS Analyser used for the control/analysis of AraChem products

Modern analysis techniques are applied for routine characterization of the synthesized intermediates and to insure the quality control of our products.



AraChem-Synthesis offers her customers a wide range of services to support their projects. Our synthetic teams have acquired large expertise in the field of modern organic synthesis and will complement and support you efficiently to carry out your project / development program to good terms.

Benchtop GC/MS Analyzer used for the control/analysis of AraChem products



Organic Elemental Analyzer used for determining the chemical composition of organic compounds (C,H,N,O,S)

AraChem - *Synthesis* policy is to introduce catalytic methodologies - homogeneous, heterogeneous and enzymatic - in organic synthesis, particularly in the production of pharmaceuticals and fine chemicals intermediates. The selection of a synthetic route to produce the desired chemical is consciously made taken the environmental factor into consideration.

Beside conventional stirred reactors used for the production of chemicals, we can carry out continuous catalytic reactions in fixed-bed reactor. The choice of the catalyst and the optimization of the reaction parameters are performed in a catalytic test reactor equipped with a catalyst basket, then validated in a bench-top fixed-bed reactor (see below).



*Test reactor used in the evaluation / validation of a “catalytic” route for the production of chemicals at high temperature and/or pressure:
Max Pressure: 3000 psi (200bar)
Max Temperature: 350 °C*

(T316 stainless steel Fixed Head stirred reactor, Model 4567, from Parr instrument Company, Illinois-USA with a programmable controller Model 4843)

The reactor has a capacity of 450mL and equipped with a pressure transducer, a tachometer (to control stirring speed up to 1500 rpm), a temperature controller, a cooling coil, a liquid sampling valve to take samples at desired interval of time and a stirrer with gas entrainment technology to insure maximum gas dispersion into a liquid system,.

The reactor can also be equipped with a static design catalyst basket for the rapid optimization of the reaction parameters when using a heterogeneous catalyst. The catalyst is loaded in the basket to protect it from grinding during operation. The specially designed stirrer for the catalyst basket combines radial flow and gas entrainment technology to provide an improved mixed gas and liquid flow through the catalyst bed. Thus, the three-phase mixing produced is comparable to the conditions in a fixed-bed reactor

Validation of the catalyst performance under the optimum conditions previously defined using the test reactor described above (with the catalyst basket) is carried out in a bench-top fixed bed reactor at AraChem laboratories or in collaboration with Delft University of Technology – the Netherlands.

The continuous production can be performed in a fixed-bed tubular reactor at AraChem laboratories..

Dimension and Operating conditions of the presented fixed-bed (see foto):

i.d.:40mm h:2m

Max Pressure:60 bar, Max Temperature: 250 °C

Feed tank: 50L



At *AraChem*-Synthesis laboratories we can handle different kind of chemistry. We have the capability to produce customized products from small scale for research purposes to kilogram quantities tailored to the special needs of the specialty chemicals, pharmaceuticals and petrochemical industries. For further information about our synthetic capacities and services, please direct your inquiries to:



Contract Research & Custom Synthesis
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AraChem

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