



Laborchemie Apolda GmbH

## Laborchemie

Laborchemie Apolda, located in Thuringia/Germany, has many years of experience in customized synthesis of specialty chemicals and Active Pharmaceutical Ingredients (API's).



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## Products

Laborchemie Apolda GmbH offers specialty products to the international chemical and pharmaceutical industries.

Laborchemie Apolda has its own scale-up and multi-purpose production facilities. We supply products in quantities ranging from grams to tons. We manufacture our products in accordance with ISO 9001:2000 and cGMP quality standards.

### Product Series

- Liquid Crystals Substances

APIs, e.g.:

- Processing Chemicals for
- Epoxy Resin Systems
- (e.g. BF<sub>3</sub> -Amine Complexes)

- Butethamate
- dihydrogenecitrate

- Carbidopa monohydrate

- Fine Chemicals
- D-Penicillamine

- Menglytate

- Prolonium iodide

- Prussian blue insoluble
- (exclusively for Heyl Berlin)

- Sodium-2,3-dimercapto -
- propane-1-sulfonate
- (DMPS-Na)

### Methods of Synthesis Available

- Acylation / Alcylation
- Ring Closure Reactions
- Bromination



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- Esterification
- Cyclisation
- Use of H<sub>2</sub>S (Hydrogen Sulfide)
- Chlorination with
- Thionylchloride
- Use of BF<sub>3</sub>
- (Borontrifluoride Gas)
- Hydrogenation (&lt; 6 bar)
- Williamson Synthesis
- NaBH<sub>4</sub> Reduction
- Grignard Reactions
- LiAlH<sub>4</sub> Reduction



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## Development

Our development department makes your ideas become reality. This is not limited to the upscaling of lab processes and the adaption of existing procedures according to the individual requirements of our costumers. We support the development of new synthetic pathways for the synthesis of your products as well.

We offer a development service, which includes a wide range of synthetic and process development of various products.

A special domain is the development and optimization of syntheses of liquid crystalline compounds (LC) and pharmacologically active ingredients (API), as well as cosmetics, precursors and intermediates.

As a matter of course, the strict GMP requirements for the manufacturing and handling of pharmaceuticals is taken into consideration already on the early stage of development.

Working as a supplier for well-known producers of liquid crystal mixtures since many years, we have great experiences in the synthesis of liquid crystalline compounds and their intermediates. Therefore we use most actual technologies, for example organometallic catalysis and quantum-chemical methods (for synthesis optimization).

The spectrum of special products and the efficiency of existing processes will be enlarged by introduction of very special techniques, such as microreaction technology and low-temperature technology, in near future.

As an innovative company we cooperate with universities and high-tech enterprises and make recent research results applicable for industrial purposes much faster.

Of course we make our services available not only within our own corporate group, but also for our worldwide strategic business partners and for you, as a probable new customer, as well.

The development services of the Laborchemie Apolda range from the development of lab to technical processes, with the main focus on four categories:

- technical research (lab process)
- technical process development /pilot production
- scale-up / process optimization
- documentation

The use of technical equipment and methods that are state-of-the-art, in combination with proven standardized operations, is an professional approach to fulfill the requirements of our costumers. That way we ensure a save and efficient realization of all costumers projects.



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## Equipment

The Production Building is designed exclusively for the chemical synthesis of APIs and high quality chemicals. Production, storage and warehousing, maintenance and power supply belong to this area. Utilized areas are distributed as follows:

- Storage area for chemicals approx. 1,100 sq. m.
- Storage area for packaging approx. 360 sq. m.
- Warehousing area approx. 550 sq. m. (partially air-conditioned)
- Production area approx. 4,200 sq. m. (distributed over three floors)
- Power supply area approx. 1,200 sq. m.

Laborchemie Apolda has some special in-house areas, so called room-in-room or white room design, for the final steps of manufacturing chemicals. The construction was done with the installation of separate air-conditioning and/or separate air-handling systems. The production area is constructed with a separate air conditioning system to insure against any cross contamination.



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## Quality

Customer satisfaction is the driving force behind all our business activities. This commitment applies to our entire value chain, from purchasing raw materials, taking and processing orders, production, storage and delivery of our final products. Our entire staff in development, production, quality department, customer service and sales is continuously trained to meet the quality objectives for the full satisfaction of our customers.

Our Key Performance Factors are:

- Certification of our Quality Management System according to the DIN EN ISO 9001:2000 standard,
- Certification of our Environmental Management System according to the DIN EN ISO 14001,
- Adherence to cGMP standards,
- Successful audits of our facilities by customers and agencies.

For Laborchemie Apolda, quality is a continuous process of improvement to meet customer requirements.



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## Environmental Management

Laborchemie Apolda is also committed to the environment - it is an enterprise with a current environment certificate. The requirements as regards environment and safety are part of the corporate policy and they are determined in the management manual.

Important investments have been made, e.g. a new synthesis plant as well as a new solvent receiving and storage facility which meets all environmental and safety standards to avoid risks of polluting the environment and harming human beings and their habitat. All manufacturing processes meet the requirements and obligations of the German and European environment protection laws.

The documents for the environmental audit are assessed annually by the environmental protection officer within the eco-audit, they are then updated. After that an environment protection programme with new annual environmental targets are deducted and implemented by the management of the company. We always forward our products properly labelled and packaged. The labelling of the products considers all the legally regulated requirements for hazardous materials– hazard signs, hazard information (R-sets), safety (S-sets) and transport information.



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## Regulatory Affairs

In the field of active pharmaceutical ingredients, Laborchemie Apolda internationally cooperates with customers in Regulatory Affairs. Thus audits are not only performed by the TÜV Thuringia, the TLLV (Thuringian State Office for Food Safety and Consumer Protection; pharmaceutical department), but also by international customers and authorities.

Our service includes preparation and compilation, among other things, of Drug Master Files as well as CTD documents to be reviewed by authorities.



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## AboutUs

Laborchemie Apolda was founded 1949 and is an independently owned, family-run company located in Thuringia / Germany. Our Mission is to offer specialty products to the international chemical and pharmaceutical industries. As a niche specialist, we want to focus on areas and products that are too insignificant for large global conglomerates and too inaccessible for smaller business units. Our operative technologies and flow of operation has to be characterised by process-expertise and our professionalism in the market place.



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## Location

Apolda is one of the oldest Thuringia towns and is in the centre of „Weimarer Land“-approximately in the same distance between the classical town Weimar and the University town Jena. Convenient traffic connections to the motorway A 4, to the railroad Berlin - Frankfurt and to the closely located airport of Erfurt are available.



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International

We market our products worldwide. Important markets are the US, Japan etc.

International representatives of LCALCA exports to



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## Design, concept and programming

CTI New Media GmbH [www.cti-newmedia.de](http://www.cti-newmedia.de)