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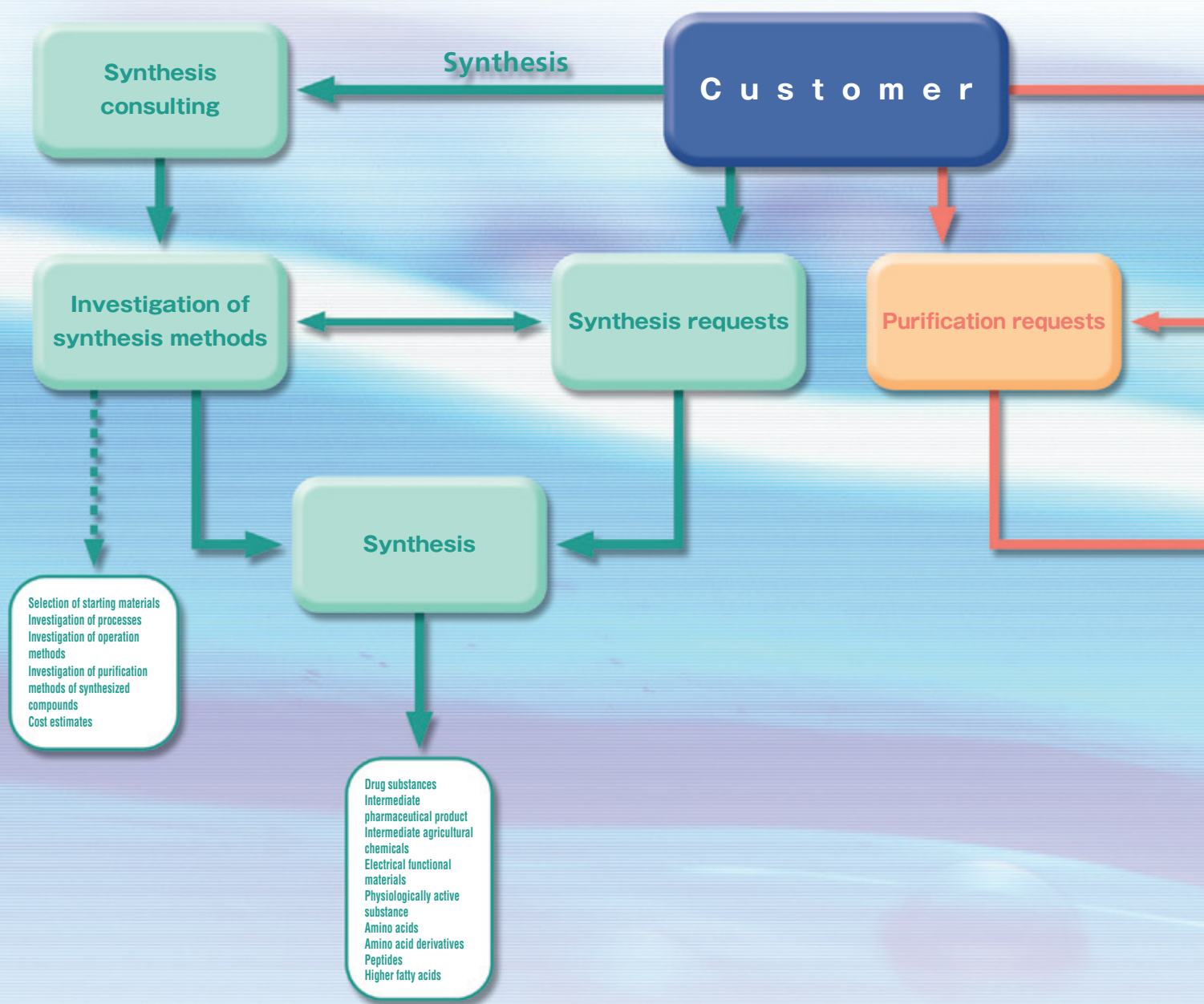
Contract Services



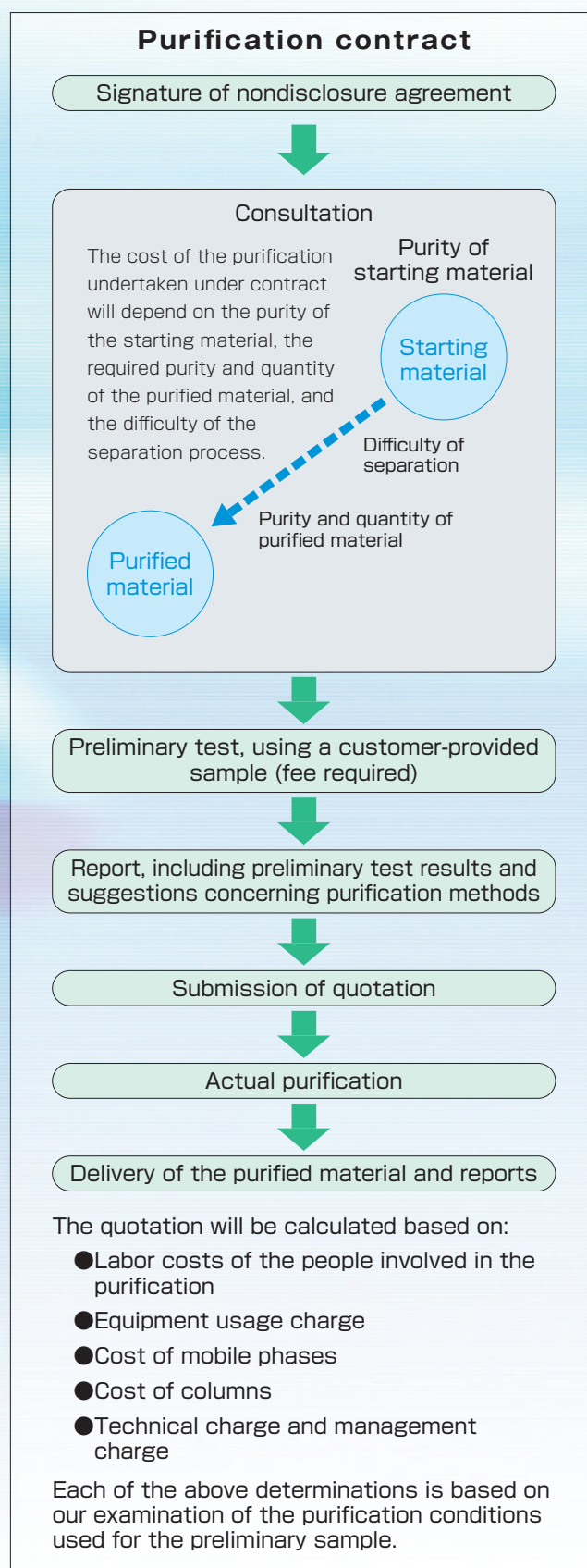
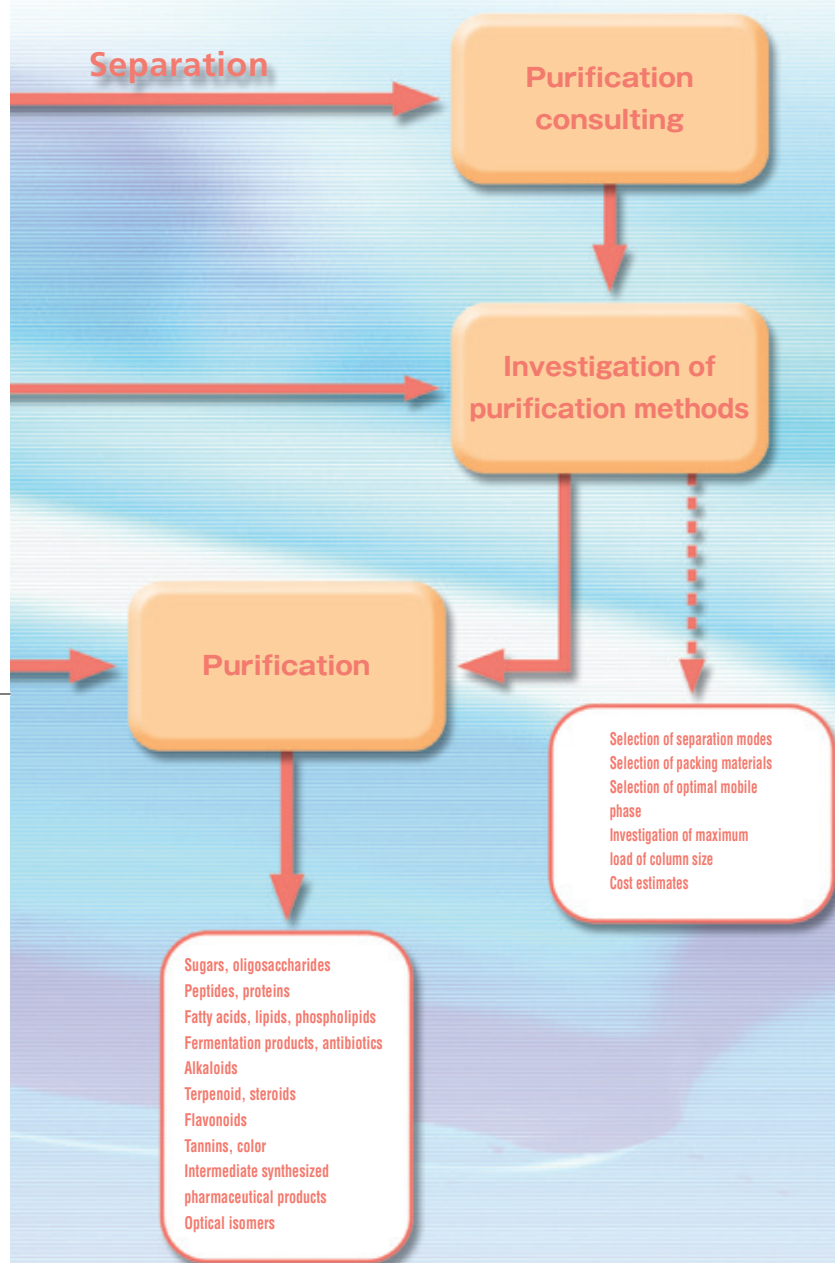
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Overview of contract service

Supporting progress in chemistry and contributing to



the future of fine specialty chemicals



- Advanced technology
- Rich experience
- Excellent cost performance
- Security

Separation

In addition to synthesis technology, isolation and purification technologies can play an important role in the production of the fine specialty chemicals. YMC Co., Ltd. is in the unique position of being an expert in separations methodology as well as being a manufacturer of HPLC columns and packing materials.

YMC Co., Ltd.'s advanced technology can support not only the purification of stable synthesized products, but also the separation of compounds that are unstable under conditions of heat, pH, and light. Isolation and purification from complex matrices, such as natural products, is also possible.

YMC Co., Ltd. can address the requirements of isolation and purification from milligram scale to ton scale.

Synthesis

There are many varieties of organic intermediate products that are regarded as the starting point of fine specialty chemicals. The numbers and types of organic intermediate products are increasing for pharmaceutical products, agricultural chemicals, flavorings, biotechnology products, electronic products, etc.

YMC Co., Ltd. can conduct simple, single step reactions, such as the conversion of various functional groups.

YMC Co., Ltd. can also conduct a more complex, multi-step synthesis of natural products, pharmaceutical and agrochemical intermediates, and stereo selective reaction processes.

GMP compliant production of pharmaceutical intermediates and active pharmaceutical ingredients are possible.

The state-of-the-art facilities and large scale factory

- Complete explosion-proof construction
- Centralized control by computer
- GMP compliant
- Clean environment

Separation

Facilities

- HPLC preparative isolation system
- HPLC column, column size 10-400 mm I.D.
- Fraction concentration equipment
- Crystallizer
- Vacuum filtration equipment
- Vacuum drying equipment
- Freeze drying equipment



Synthesis

Facilities

- 50-1000 L GL, SUS reaction vessels
- Clean room
- GMP compliant



Analysis

Facilities

- HPLC
- GC
- Infrared spectrophotometer
- UV-Vis spectrophotometer
- Elemental analyzer
- Polarimeter
- Mass spectrometer (LC/MS)

