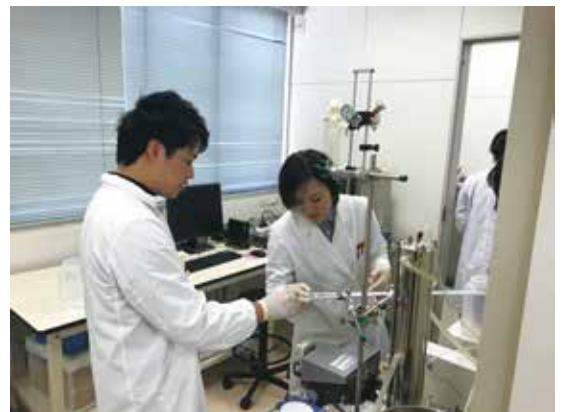
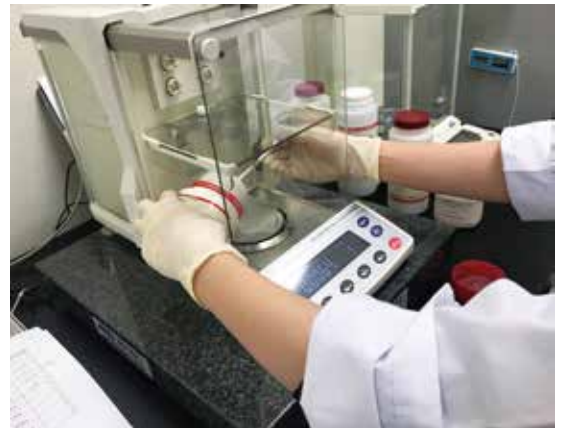


Interview with

Katayama Chemical Industries Co., Ltd.
Minoh office R&D team Sciences

“Inspect pipettes easily in-house. Make pipette accuracy management simpler and less time-consuming.”



BM-014: Pipette accuracy testing kit

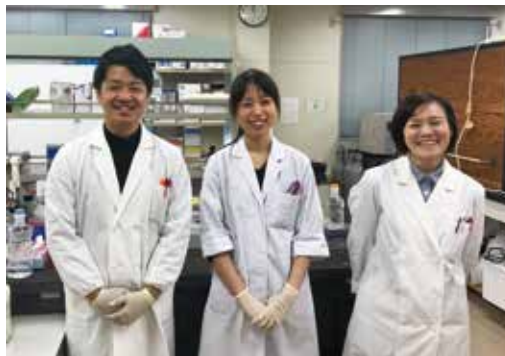
Katayama Chemical Industries has long been producing chemicals centering on reagents since their inception in 1918.

They apply their technology to advance into fields such as preventive medicine, environmental analysis and fundamental research in biotechnology.

As they develop unique, niche and high-value-added products in the growing life science field, they use A&D's pipette accuracy tester and leak tester as well as our high-precision analytical balance.



Takaaki Otani, R&D Manager



R&D Team
Yasunori Yamashita, Yuki Sugihara, Yui Hiramatsu

————— For developing reagents, we take great care in managing the accuracy of our equipment.

————— **First, please tell us the purpose of building this new department.**

Otani: In 2003, we established a new department devoted to reagents for biotechnology-related research to start our second business. As a participant in the regional cluster network¹, we promoted our business by introducing technologies developed by academic research organizations. This was a pioneer of what is now called Open Innovation². Major companies would still conduct research and development in-house at that time.

————— **What exactly did you develop?**

Yamashita: We looked at the application of nanoparticles and received a license to use patent related to liposome³-based drug delivery system technology from AIST⁴, which also sent researchers to us for technical guidance. As a result, we were able to achieve the commercialization of GLYCOLIPO™, a molecular imaging reagent based on targeting liposome, in a short term.

Otani: Our GLYCOLIPO™ Technology mimics white blood cells, a kind of vivo molecular. It gives liposome directional characteristics toward specific molecular targets by chemically decorating the surface of the liposome with various recognition probes such as antibodies and sugar chains. Various substances can be enclosed inside the liposome. It can, therefore, be used as a tool for bio-imaging and, by enclosing drugs, as a carrier for drug transport.

—— **Precision and concentration seem essential for product development in the invisible nanoworld.**

Hiramatsu: Correct. Accuracy management of analytical devices is vital in the invisible nanoworld. Operators are very careful when using these devices. In particular, they would spend considerable time testing pipette accuracy and reporting the results as they used a classical method.

—— **If only we had A&D' s pipette accuracy tester earlier.**

—— **You use the BM-252 semi-micro analytical balance, don't you?**

Sugihara: Yes. We use the BM-252 because the 250g capacity is perfect for our work. We also use the AD-1671 anti-vibration table so we feel comfortable and assured that we can perform accurate measurements.

Yamashita: We are also very happy that the balance is equipped with a fanless ionizer to remove static electricity. Especially in a dry season like winter, a balance without an ionizer is of no use.

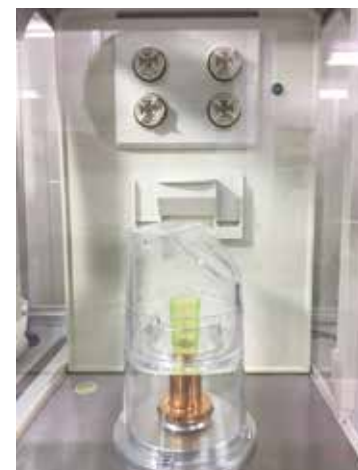
Sugihara: The internal calibration weight also gives us peace of mind.

—— **And you use pipette accuracy and leak testers as well?**

Otani: We purchased the BM-014 pipette accuracy testing kit and AD-1690 leak tester on the recommendation of an A&D' s salesperson and were surprised at its effectiveness. Previously the pipette accuracy management required substantial time and extreme caution. The BM-014 made periodic checks much easier. And the AD-1690 has been convenient for daily checks.

Sugihara: Our office has more than 20 pipettes, so these devices have saved us a lot of work and time. Small capacity pipettes are especially difficult to handle, and we had to be really careful when testing their accuracy. To be honest, we sometimes found it quite a pain to do the test.

Hiramatsu: We also use them in training for the new employees.



Pipette accuracy test using the BM series

—— **What specifically does that involve?**

Hiramatsu: The software helps instill basic skills as it allows us to set acceptability criteria. Thanks to that, even our new employees make almost no errors now. If only we had such a useful tool like this earlier.

—— **Contributing to society by creating valuable technological knowledge, valuable products, and by providing valuable services.**

—— **What are your future goals?**

Otani: The life science field is changing rapidly. By helping our customers' research and development processes, we want to create valuable technical knowledge and products and provide valuable services, as our philosophy of management states. We consider it our mission as a reagent maker to drive the research reagent market with new technologies.

Yamashita: We want to compete on the global scale taking advantage of the flexibility offered to us by our company size.

—— **We would like to thank Katayama Chemical Industries for taking the time to do this interview.**

(Interviewer: A&D Company, Limited Sales Promotion Division)

- Note 1: Regional Cluster Network: An organization that seeks to create new values through cooperation and competition among enterprises, universities, research foundations and government organizations that aggregate geographically.
- Note 2: Open Innovation: Allowing R&D to take place in conjunction with sources outside of one's own business; i.e. using technology developed by another company by buying the relevant patents or the company itself, or letting another company use one's intellectual properties to develop new products. It has potentials for reducing the risk and the time of development.
- Note 3: Liposome: Artificially formed lipid membrane particles. Used as model for the lipid bilayer membrane structure of cells, drug delivery system (DDS), etc.
- Note 4: AIST: National Institute of Advanced Industrial Science and Technology

Cooperation



Katayama Chemical Industries Co., Ltd.

| | |
|----------------------|---------------------------------------|
| Head office location | 2-5-10, Dosho Machi, Chuo Ward, Osaka |
| Minoh office | 4-1-7, Ina, Minoh City, Osaka |
| Established | Apr 14, 1918 |
| President | Hideki Katayama |
| Capital | 30,000,000 yen |
| Employees | 170 (As of Jun 28, 2018) |



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