

## Nippon Shikizai, Inc

Established: March 1, 1957

Head office address: 5-3-13 Mita, Minato-ku, Tokyo

Capital: 552,7million (as of February, 2008)

Annual sales: 6,08billion (2007 fiscal year)

Number of employees: 235 including 176 temporary employees

Business areas: Makeup, cosmetic and other basic skin care, quasi-drug product planning, contracting services from development to manufacturing

URL: <http://www.shikizai.com/japanese/index.html>



The installation of Asprova led to the realization of both material requirements planning “MRP” and production scheduling, in order to achieve visualization of the workflow and a reduction in the time taken to plan the schedule.

Nippon Shikizai Inc. was established in 1957 as a contract manufacturer of cosmetic products. The Zama factory, at which Asprova was installed, was set up in November 1979 as Nippon Shikizai’s main factory under the Good Manufacturing Practice, a government standard for production and quality control of pharmaceutical products. The products that Nippon Shikizai produces can be categorized into three types: powders, lip sticks, and creams. The product planning, research and development, raw procurement, manufacturing, and shipping of these products are carried out under a strict checking system.

This factory installed Asprova and was able to simultaneously execute material requirements planning and production scheduling, expanding its use to cover the Ayase and Suita factories as well. We heard from Mr. Masao Takeda, Executive Director of Zama factory and Operations, and Mr. Masayuki Hosokawa and Mr. Arihira Okubo, both in the production control team of the production operation department, who provided us with some insight into the background, the difficulty, and the impact of installing Asprova.

### We aimed for to merge our MRP and scheduling systems at the same time that we replaced our ERP system.

Before installing Asprova, the Zama factory had used an ERP package as its core system and had previously tried to make use of both its MRP and production scheduling functionality. However, it took too long to carry out all the processes and so in practice the system was unusable. Mr. Masao Takeda, Executive director of Zama factory and Operations reflects on the situation back in those days. “The functionality of the ERP package used before was not acceptable in practice because we needed to spend too much time for production planning and material requirements planning. As a result of those problems, we had to do scheduling work manually with Excel, develop our own system to make material requirements planning, and input each result directly into the core system. Under this situation we had a strong desire to accelerate the processing speed as well as to reduce the workload of the staff. Furthermore, it was inconvenient that we were unable to connect the functionality of the scheduling and the MRP. So, we came up with a plan to synchronize the scheduling and MRP and aimed to build a system that would enable us to do Just-In-Time like planning and to calculate the exact material requirements so that we could reduce our inventories.”

To achieve this goal, Zama factory decided to replace its old ERP system which included a production control package and install Asprova. For reference, this factory employs a

make-to-order production system that has two major production processes, “the bulk production process” in which the contents of foundations and lipsticks etc are produced and “the assembly process” in which these contents are then put into containers and packed to become the finished product.

### Nippon Shikizai chose Asprova because of its large user base and excellent functionality.

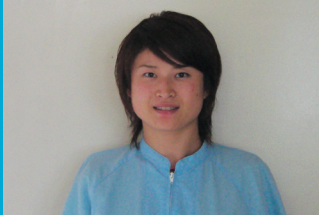
Replacing the old ERP system, then installing a scheduler and a MRP was the actual aim of the project. The Zama factory got proposals from three firms, including Japan Information Processing Service Co., Ltd., which later became its System Integration partner. Although in the beginning three different companies proposed three alternative schedulers, from February 2006 the Zama factory had started to consider Asprova and eventually, this became their chosen scheduler. Mr. Takeda explains the reason for this decision as follows: “in addition to the great installation record, Asprova’s functionality and fast processing speed made us decide to choose it. Asprova was also able to handle both process types of our production, bulk processing and assembly.” The Zama factory therefore decided to employ “JIPROS”, the ERP package provided by Japan Information Processing Services Co. Ltd., for small and medium-sized enterprises, as its core system, and initiated the preparation for Asprova installation in October 2006.



MASAO-TAKEDA  
GENERAL MANAGER ZAMA FACTORY,  
GENERAL MANAGER CONTROL OF MANUFACTURING DEPT.



MASAYUKI-HOSOKAWA  
Control of manufacturing Sec.



AZUSA-FUKUMORI  
Control of manufacturing Sec.



YUHEI-OKUBO  
Control of manufacturing Sec.

This project was a very tough one because the installation of Asprova was accompanied with the replacement of the core system. The project's difficulty level was quite high due to the extent that Asprova was to set up to be able to simultaneously execute material requirements planning and production scheduling. However, the tremendous efforts which project team members made enabled them to establish an ideal structure at the present stage.

- Points on which Asprova was highly praised
- Reduction of manual workload
- Improvement in efficiency and precision of scheduling
- Realization of MRP functionality
- Reduction of MRP error

## The focus of the installation was how to set up the master for well-balanced MRP and scheduling.

The installation in the Zama factory, was quite challenging because we tried to make Asprova function as both MRP and scheduler at the same time. In this regard Mr. Masayuki Hosokawa in the production control team of the production operation department told us as follows. "Without precise scheduling there can't be precise MRP. To make both functionality work together, we would want to have all the features in one system."

When using Asprova to calculate MRP, we normally input somewhat brief dates to the master of Asprova and use Asprova as a MRP engine to run the system. In this case Asprova is a MRP rather than a scheduler. By contrast, when using Asprova to do accurate scheduling, we input detailed dates of each production process. Thus, the master of Asprova must be finely tuned in order for Asprova's functionalities of both scheduler and MRP to work simultaneously.

When setting up the master, the Zama factory has to consider the amount of material lost from sticking to the inside wall of the machine in the bulk producing processing in the factory. The amount lost differs from each machine and the differences have to be considered upon planning material requirements. Mr. Hosokawa said, "a master set up with detailed dates was unnecessary only to calculate a medium-term material requirements. We, however, must have exact numbers including the loss of bulk taken into account for material requirements planning, therefore needed a master for detail-oriented dates." Mr. Hosokawa was able to make use of Asprova's 'expressions', a standard feature to define detailed formulas, to enable to obtain the precise material requirements at the targeted level. The process was said to be the repetition of trial and error because the Zama factory needed to improve the accuracy of requirements planning result with the amount of bulk lost in each machine calculated and to have an even more detailed master for production instruction orders.

After overcoming these challenges, Asprova would finally be tuned for practical operation.

## Visualization of workflow and a full reschedule in only 6 minutes.

Under the old system each section such as production management team, the bulk production team, and the assembly team, obtained dates from the core system, made each material requirement plan, and exchanged information. Thus, it took so much time and labor to fix the schedule and to figure out the final material requirements. The installation of Asprova made a big change of this situation. Mr. Hosokawa said that "the flow is as follows; order data and inventory data are delivered from the core system to Asprova MS,

the production management team reschedules and obtains MRP, then the detailed schedule is going to be made and delivered to each team. The sections concerned check the schedule on Asprova MES. Having Asprova make MRP and registering the calculation formula into the master, we can visualize the flow"

Currently Asprova receives each dates from the core system twice a day and makes three month-plans of all the orders. It takes only six minutes to make schedules even though they multiply assign a plan to obtain precise MRP and production schedules with the exact amount of bulk lost. With this regard, Ms Azusa Fukumori in production management team said that "Because we produce our products upon receiving orders, our production plan is to be often re-planned as our customers change their requests. Every time we reschedule our plans, Asprova needs only 6 minutes to reschedule and we rarely feel stress. To establish our schedule, we repeatedly reschedule with variable factors."

The Zama factory created an operating procedure document for the core system and Asprova when installing those systems. Mr. Arihira Okubo in the production management team told us on this point that "I, myself, went through difficulties not knowing how to operate the old core system. So, I drafted an operating procedure document, hearing and researching the workflow from the persons in charge of each process and making photocopies of many detailed operating screens of the core system as well as Asprova so that anyone anytime could use the system as people change."

This operating procedure document becomes "the manual" consisting of over 220 pages. This effort shows well that the Zama factory pays attention not to centralize know-how to some specific persons. After starting the system operation, the Zama factory made effort to successfully shorten the formula for MRP from over 8,000 to some hundreds characters, making use of Asprova's COM interface to create a plug-in, to make it easier to maintain the calculation formula in the future.

The Zama factory made plug-ins to simplify the operation which adjust schedules and realized the reduction of workload and improved manageability. In addition, the factory exercises its ingenuity, for example, to build up a tool with Access to enhance operating efficiency because it is important for the Zama factory to keep up with the master all the time due to the continual replacement of around 40 percent of all products and a high speed product cycle. In this way, the factory solved major problems in operation upon and after installing Asprova. Mr. Takeda said that "the aimed-for system has been built so far in this project. As long as the company's direction and operating method has not changed, we will keep using the current system with some additional improvement as needed. Although we haven't succeeded in reducing inventory because of various external factors, once the situation around us gets settled, the figures will indicate its efficiency."

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