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[Lab. of Microbiol.]

**Parametric Analysis of Length Distributions of the Fission Yeast,
Schizosaccharomyces pombe, in Chemostat Culture.**

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Assuming that cells grow exponentially in length, the cycle of cells in chemostat cultures was analyzed parametrically by the age-size method, which fitted well to raw data of length distribution. For simulation, we used the cell length and coefficient of variation at division from empirical data. The cell length and coefficient of variation at birth, the specific growth rate in extension, and the proportion of growing cells were estimated for simulation. We found that the stop-grow point of a cycle depended on the culture conditions: cells grown at $D=0.247\text{ h}^{-1}$ in the chemostat culture had the stop-grow point at 0.72 of the cycle, similar to cells growing exponentially in the batch culture. There was a sub-population of non-growing cells estimated.

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[Lab. of Herbal Garden]

Report on Quality and Manufacturing of Bear Bile from Living Bear.

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Bear bile has been obtained from bears after slaughtering the animals. Today, in China, bear bile is collected in bear farms without killing the animals. And it has confirmed that the third generation (kept) is artificially bred. The ingredients of bear bile collected from live bear in Heilongjian, Liaoning, Jiling, Sichuan, Shanxi, and Shanghai were compared with those of natural bear bile obtained by killing bear in India and Canada, by thin-layer chromatography. The main component was taurooursodeoxycholic acid, and there was no obvious difference between the TLC profiles of the two bear bile samples. No foreign matter was detected by the microscopic examination, and no berberine compound was detected in bear bile from live bears. The ursodeoxycholic acid contents of bear bile from living bear were 14.24% to 15.60%, and those of the natural bear bile from India and Canada were 14.19% to 16.52%, showing that the ursodeoxycholic acid content was more constant in biles collected from live bear than in the bear biles from slaughtered bears.

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[Lab. of Herbal Garden]

**Phytosociological Studies of the Communities on *Angelica acutiloba* and
A. acutiloba var. *iwatensis*(1) Gifu Prefecture and Its Surroundings.**

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Phytosociological studies on *Angelica acutiloba* were carried out in Gifu prefecture and in the neighboring areas. The taxa of *Angelica acutiloba* were found in the wild. One was *A. acutiloba* KITAGAWA var. *iwatensis* HIKINO growing in the mountainous temperate grassy fields, and the other was *A. acutiloba* KITAGAWA var. *acutiloba* growing on the banks of valleys in the middle temperate zones. Both taxa were found at rocky places where chances of being disturbed. Both of the wild *A. acutiloba* were considered to be adaptable to environmental changes as they grow in the ground liable to disturbances. Flora investigation implied that the community of *A. acutiloba* var. *iwatensis* had some elements of the *Miscanthus sinensis* community and some elements of the subalpine broad-leaves grass community. It was clearly shown that the community of *A. acutiloba* var. *acutiloba* belong to that of *Rhododendretum indicum*.