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<外国人研究者プロフィール / Profile>

国籍: Nationality:	タイ Thailand
日本留学時の滞在期間: Period of Stay During in Japan:	2001年10月 ~ 2004年3月 October, 2001 ~ March, 2004
日本留学時の大学: Education Background in Japan:	県立広島大学 Prefectural University of Hiroshima
専攻分野: Major Field:	総合学術研究科生命システム科学専攻 Enzymology
現在の所属/職位: Present Institution/Status:	コンケン大学理学部 / 講師 Faculty of Science, Khon Kaen University / Lecturer



シーホン・ブーンルー
さん
Mr. Sophon Boonlue

<研究報告 / Follow-up Research Fellowship>

受入研究者氏名: Research Adviser:	森永 力 教授 Professor Tsutomu Morinaga
受入れ期間: Researching Period:	2011年1月31日 ~ 2011年3月31日 January 31, 2011 ~ March 31, 2011
研究課題: Theme of Research:	セルラーゼ生産高温菌を用いた固体培養による農産廃棄物からのバイオエタノール生産 Hydrolysis of agricultural residues by cellulase-producing thermophilic fungi in solid-state fermentation for ethanol production

■研究概要 / Outline of Research



DNAシーケンサーのデータを
チェックしているところ
Checking the data of DNA sequence

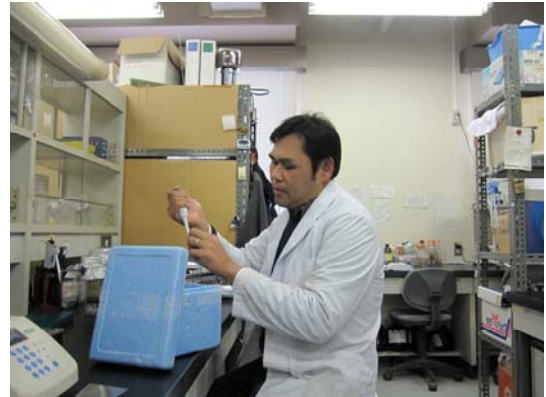
In order to obtain the glucose as a c-source for ethanol fermentation by yeast, the hydrolysis of agricultural residues (rice straw, rice bran, and sugarcane bagasse) by cellulase-producing thermophilic fungi isolated from Thailand, in the SSF will be investigated. The condition for SSF will be optimized.

■研究成果 / Result of Research

The cellulase production by *Sporotrichum thermophile* BF1-7 was carried out on a cheap materials. The best carbon and nitrogen source for cellulase production by this fungus were a mixture of rice straw:rice bran and $(\text{NH}_4)_2\text{SO}_4$, respectively. Optimal condition for cellulase production by this fungus was performed by orthogonal experiment, which found to be pH 11, 75% initial moisture, 0.6% nitrogen concentration and 1:1 (w/w) of mixture carbon source (rice straw:rice bran). Under this optimal culture condition, CMCase and FPase were obtained at 608.57 and 146.37 mU/g dry weight, respectively. This may possible for conversion of agricultural materials to sugar after conventional hydrolysis of lignocellulosic material by alkali and heat.



ソモギー法でサンプルを煮沸しているところ
Boiling the sample by using Somogyi method



セルラーゼ酵素反応を行っているところ
Enzyme reaction of cellulase

■日本留学の思い出 / Memories of Studying in Japan

My impression has many things since I was studied Ph.D. at Hiroshima prefectural university under supervision of Professor Tsutomu Morinaga. He has been being kindly for me and took good care through my Ph.D. course. Not only that, he has been taking good care and support for my research in Thailand. I am very appreciate in his kindness and would be exprees my deep heartfelt to him. For environment for doing research in Prefectural university of Hiroshima, I would say that is great for facility particularly instruments, chemical supply and elses. For peoples in the lab, they are quite good, I got many kindly helps from them during the peroid of my stay. Last but not least, we would like to express my sincerely thanks to JASSO and former Scholarship (Monbusho) for all sopport during my research in Japan.