

Thesis Title	Purification of Industrial Rice Bran Waxes
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Abstract

Industrial rice bran wax is a by-product of rice bran oil refinery. The presence of oil will affect the physical as well as chemical properties of the wax, e.g. lowering of the wax solidification point, increasing the iodine value. When rice bran wax is adsorbed onto rice hull ash (filter aid) at 1:1 w/w, cooled "isooctane" or "isopropanol" (3-4 °C) can selectively elute out the oil. Subsequent elution of the adsorbed wax with hot "isooctane" or hot "isopropanol" (at 80 °C), the wax is recovered. "Isooctane" is more effective than "isopropanol" in removing the oil out of the column. The wax separated by using "isooctane" has an iodine value between 7.73-0.65 and melts at 80-88 °C. On the other hand, the first 2 mL fraction of rice bran wax eluted out of the column with hot "isopropanol" has the iodine value of 36.12 and melts at 76-78 °C. The 2nd to 10th 2 mL fractions contain less oil and have the iodine value of 1.66-0.48. The melting point of these fraction are between 84-88 °C.

Keywords : Iodine value / Rice bran oil / Rice bran wax / Rice hull ash