Studies on Applications of Rapeseed Oil and Protein in Mainland China

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ABSTRACT

In 1996, the total population of Mainland China was 1.2176 billion, around 21% global population, while it ranked the top one of the population in the world. Since there is huge land area (9.6 million km2 square, around 7% world ’ s total land area), broad agricultural area, good natural fertile resource, and cheep labor cost in Mainland China, the rapeseed production of China still ranks the top one in the world. The high quality of oil (~45%) and protein (~35%) in rapeseed is proposed to become very important and valuable in the new applications of food. Unfortunately, the applications of rapeseed protein are inhibited by the presence of the toxic by-products-glucosinolates produced from the enzyme (myrosinase) hydrolysis or solvent extraction of rapeseed meals. Nevertheless, how to reduce or to remove the poisonous glucosinolates in rapeseed protein or oil processing is necessary to create in the food utilization and applications. In order to further improve and stimulate the food utilization and applications of feeding or edible proteins and functional oils from rapeseed, it is worth developing the economical processing of rapeseed oil and protein extraction with reducing or removing the poisonous by-products in future. Finally, this technical report is expected to be useful and valuable reference for those who are engaged in rapeseed oil and protein.

Keywords : repeseed ; protein ; glucosinolate ; meals ; myrosinase

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