

# **INTRODUCTION**

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Wheat is the raw material of flour miller. The texture of the endosperm influence the ease with which it is separated from bran during milling process, and also governs the properties of the flour produced . In hard texture the types of the endosperm is readily separated from the bran giving high recoveries of which flour, few bran particles enter the flour and so a better color grade and lower ash content flour is produced . In contrast , soft wheat tend to give much lower extraction rate of white flour and greater contamination with bran .

Milling tends to concentrate various sections of the endosperm into different flour mill streams, which are differ in their protein content from the first to the last break. This large variation in protein content among various mill streams is believed to be due to the high protein subaleurone endosperm not being as easily reduced during roller milling as the inner endosperm. In commercial practice bread wheat, streams are blended to produce several "grades" of flour varying in protein and ash content. Any unique properties of the protein of the flour in an individual stream are not utilized.

Exhaust flour production reaches more than 20 Ton monthly at EL-Hoda mill. It represents about 0.16% from the total extraction and has no effect on the flour of high extraction rate (82% or more ). Although it is characterized by its high protein and gluten content, it is considered as by-product and non essential flour in case of collecting the streams which produce flour of 72% extraction rate .

EL-Hoda mill also produces about 68.4 Ton bran flour monthly which represent about 0.53% from total flour extraction. Bran flour is characterized by its high ash and protein and its low gluten content.

The present investigation was carried out to study the chemical and rheological properties of wheat flour streams produced from two different milling systems (EL-Hoda and EL-Marwa mills).

Also, the study was conducted to evaluate the possibility of blending exhaust flour or bran flour with white flour 72% extraction rate for preparing special flours used in making different Pan bread products.