



Characterization of different types of bulgur

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PRESENTATION

Bulgur is durum wheat with its bran removed. It is pre-steamed, dried and finally crushed. It is the base product in traditional Turkish cuisine.



Picture 1 : Bulgur



Table 1: Bulgur production process

METHODS AND RESULTS

The Mixolab® analysis of 6 industrial bulgur samples, 3 fine (4106, 4186 and 4201) and 3 coarse (4154, 4214 and 5008) shows:

- ➔ A longer dough development time for "coarse" samples.
- ➔ A higher maximum torque for "coarse" samples.
- ➔ No gelatinization for all the samples.
- ➔ A greater (but limited) retrogradation for "coarse" samples.

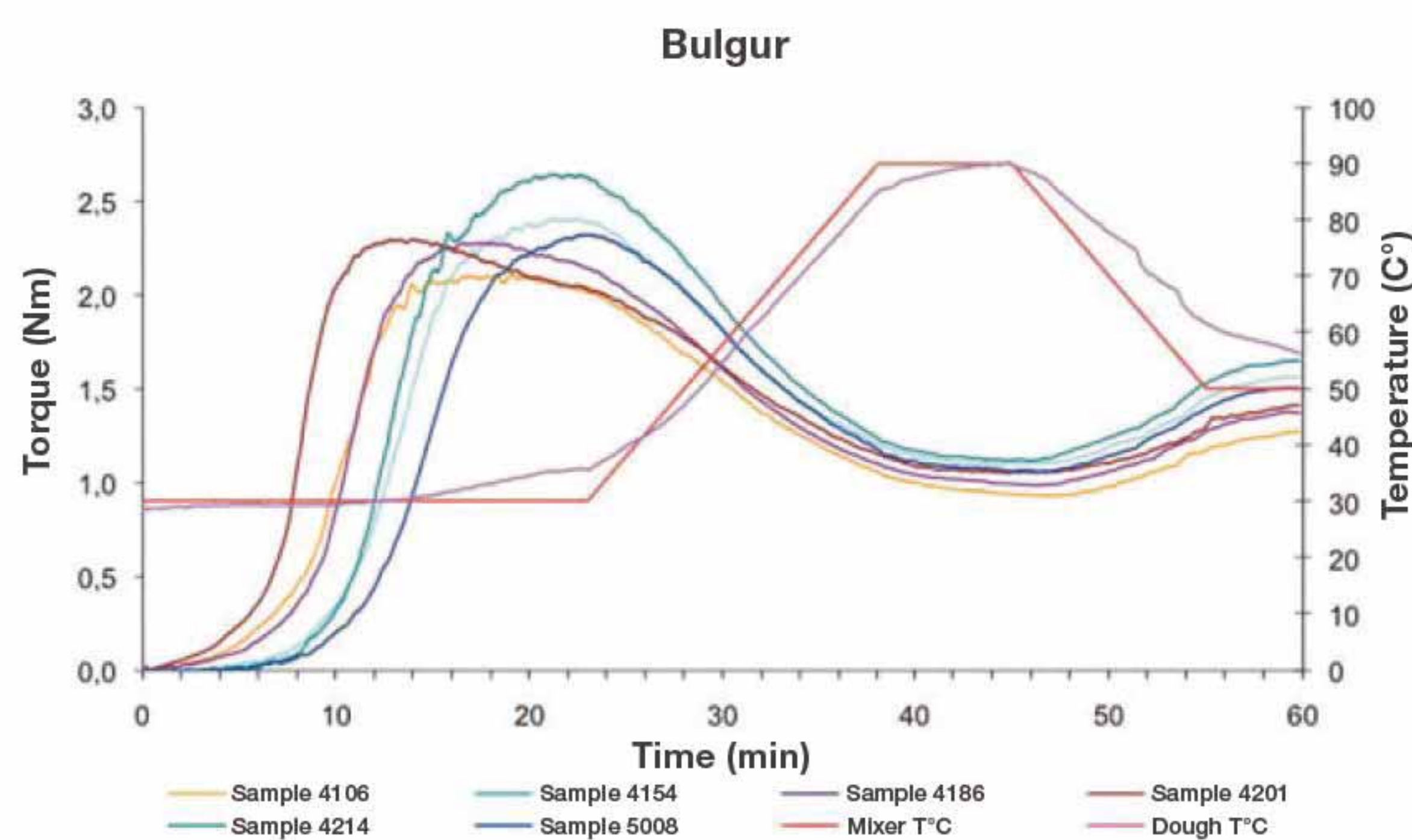


Figure 1: Mixolab results of fine and coarse Bulgur samples

COUSCOUS PROTOCOL

Mixing speed	250 rpm
Hydration	110% b14
Dough weight	90 g
Tank temperature	30 °C
Temperature 1 st step	30 °C
Duration 1 st step	23 min
Temperature 2 nd step	90 °C
1 st temperature gradient	4 °C/min
Duration 2 nd step	7 min
2 nd temperature gradient	4 °C/min
Temperature 3 rd step	50 °C
Duration 3 rd step	5 min
Total analysis time	60 min

Table 2: Chopin+ protocol

CONCLUSION

The Mixolab® is able to test coarse or fine bulgur. Moreover, the lack of a rebound around 50-60°C demonstrates that the gelatinization of the bulgur samples tested is complete (the bulgur production process includes a cooking phase in excess of water).

NB: A liquid flow may be observed at the start of the test on the mixing blade bearings. In the event of an excessive flow, reduce the hydration.



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