



# FALLING NUMBER | ALPHA AMYLASE ENZYMES METER 5000



## Purpose :

The Falling Number automatically measures enzyme activity in flours and wheats. FN measuring mode is used for determining natural alpha amylase enzymes. FFN measuring mode is used for determining total (micro-biological + natural) alpha amylase enzymes.

## Technical Specifications :

- Falling Number as in ICC Standards 107 Falling Number or Alpha Amylase Enzymes Meter 5000
- Falling Number Determination of the Alpha Amylase Enzyme according to Hagberg - as a Measure of the Degree of Alpha-Amylase Activity in Grain and Flour.
- Changing from FN mode to FFN mode or vice versa can be made by single button.
- The Falling Number automatically adjusts the boiling temperature according to the elevation.
- The company name, company address, company phone, fax numbers and web can be saved in the memory of the device.
- In order to save the results, a printer can be connected to the computer if required and the company information can be seen on every printer output together with the results.



- When the water level reduces, it passes to the stand-by mode for the safety of the operator and a warning message appears on the screen. It has blue LCD screen. The device has 20 function buttons.
- On the screen of the device, date, hour, interior temperature of the device, measuring mode and operation status of the device (running, printing, stop... etc.) can be displayed.

## As ICC : International Association for Cereal Science And Technology:

Determination of the "Falling Number" according to Hagberg - as a Measure of the Degree of Alpha-Amylase Activity in Grain and Flour

## Methods Type: Generic Methods

### Number :

**107/1 Analyte : Alpha-Amylase Activity (Falling Number)** Matrix: Grain and Flour Year of Approval: 1968 Year of Last Revision: 1995 Scope: The method is applicable to meal and flour of wheat, rye, barley, as well as to other grains and to starch containing and malted products. In this standard the word "flour" also means meals and ground grains (wholemeal).

By converting the Falling Number into the Liquefaction Number it is possible to calculate the composition of flour mixtures of desired Falling Number.

### Principle :

The Falling Number is defined as the time in seconds required to stir and to allow a viscometer stirrer to fall a measured distance through a hot aqueous meal, flour or starch gel undergoing liquefaction due to alpha-amylase activity.

### Other Specifications:

Volt/ Hertz	230v - 50/60hz
Amper	5A
Power	700W
Device Dimensions W "mm" x L "mm" x H "mm"/Weight. Kg	355 x 435 x 570/ 17 Kg
Package Dimensions W "mm" x L "mm" x H "mm"/Weight. Kg	440 x 550 x 950 / 31 Kg

### When you work with BASTAK you receive;

- ✓ Free technical consultancy for tailor made solutions,
- ✓ High quality instruments with free webinars and on-line trainings,
- ✓ Fast delivery of instruments, spare parts and consumables,
- ✓ Remote technical support (Audio and Video) six (6) days a week,
- ✓ Economical spare parts and consumables available in 10 years,
- ✓ Free factory visits, live tests and demos,
- ✓ On-Site Warranty and On-Site After Sales Service (for >20.000 USD orders)

#### Office/ Ofis

Email : [export@bastak.com.tr](mailto:export@bastak.com.tr)  
website: [www.bastak.com.tr](http://www.bastak.com.tr)

Tel : +90 312 395 6 787  
Fax: +90 312 395 6 788

İvedik OSB 1354.Cad 1387.Sk No:19  
Yenimahalle Ankara TURKEY

#### Factory / Fabrika

Dağyaka mahallesi 2010 .Cd.No:23  
Kazan Ankara TURKEY

Tel : +90 312 811 2 811  
Fax: +90 312 811 2 812

Email : [info@bastak.com.tr](mailto:info@bastak.com.tr)  
Website: [www.bastak.com.tr](http://www.bastak.com.tr)



## INTERNATIONAL ASSOCIATION FOR CEREAL SCIENCE AND TECHNOLOGY



### ICC DRAFT STANDARD No. 189

Approved: 2021

#### 1. Title

**Determination of 'Falling Number' using Bastak FNCheq to estimate the level of Alpha-Amylase Activity based on viscosity in wheat flour and wheat meal**

#### 2. Scope

The method is applicable to wheat flour and wheat meal. In this standard the word "flour" and 'meals/ground wheat' (wholemeal) are not synonymous and their meanings are defined below.

Bastak 4000 and 4500 model roller mills must be used to obtain the wheat flour sample.

Bastak 1900 model hammer mill must be used to obtain the wheat meal sample.

By converting the Falling Number value into the Liquefaction Number, it is possible to calculate the composition of flour mixtures of a desired Falling Number value.

#### 5. Principle

The **Falling Number** method indicates alpha-amylase activity using the starch in the flour or meal sample as substrate. The method is based upon the rapid gelatinization of an aqueous suspension of flour or meal in a boiling water bath and following measurement of the liquefaction of the starch paste by alpha-amylase in the sample.

#### 6. Reagents

##### 5.1 Distilled water

Distilled water or water complying with grade 3, ISO 3696.

#### 7. Apparatus

6.1 **BASTAK FNCheq apparatus model 5100 or 5000**, obtainable from BASTAK Instruments Company; Dağyaka Mahallesi 2008. Cadde No:12 Kahramankazan/Ankara/TURKEY or a regional agency of Bastak Instruments Company which includes:

<https://icc.or.at/store/189-bastak-fn>



Technical Specifications		BRAND / MODEL	
Brand		BASTAK	Competitor
Model		FN 5000	1500
1	FN Mode	Yes	Yes
2	FFN Mode	Yes	Yes
3	Altitude Correction	Yes	Yes
4	Int. ICC Standart	Yes	Yes
5	AACC Standart	No	Yes
6	LCD Screen	Colour LCD	Black&White LCD
7	Screen Digital Lines	4 lines	1 line
8	FN Test Temp °C	Boiling Temp	Boiling Temp
9	FFN Test Temp °C	90°C	90°C
10	Sample FN Test	7 g	7 g
11	Sample FFN Test	5 g	5 g
12	FN Test Solution	25 ml Dis Water	25 ml Dis Water
13	FFN Test Solution	30 ml Acid Solution	30 ml Acid Solution
14	FN Mix Time	60 Seconds	60 Seconds
15	FFN Mix Time	180 Seconds	180 Seconds
16	Direct Choose of FN&FFN	YES	No
17	Reach Test Temp	LESS THEN 10 Minutes	< 20 Minutes
18	Cooling System	Yes	Yes
19	Function Button	19 EACH	18 Each
20	FN Button	Yes	Yes
21	FFN Button	YES	No
22	Left ID Button	No	Yes
23	Right ID Button	No	No
24	Moist Gr Button	No	No
25	Moist FN Button	No	No
26	Mix Button	Yes	Yes
27	Malt Button	Yes	Yes
28	LN Number Button	No	No
29	Avarage Button	No	No
30	Shift Button	YES	No
31	Clear Button	YES	No
32	Esc Button	YES	No
33	Enter Button	Yes	Yes
34	Start Button	Automatic	Automatic
35	Stop Button	Yes	Yes
36	Left ID	No	Yes
37	Write ID	No	No
38	Print Button	Yes	Yes





39	Feed Button	Yes	Yes
40	Code Button	No	Yes
41	Standart Sample	Yes	Yes
42	Service Speed	FAST	Slow
43	Warranty / Service On Site / Customer's Facility	YES	No
44	Spare Parts Support and Delivery	FAST	Slow
45	Spare Parts Cost	LOW	High
46	Training Support Via Whatsapp (Audio and Video)	YES	No
47	Delivery Time	SHORT	Long
48	Product Price	ECONOMICAL	EXPENSIVE

### "More Than 23 Years of Experience ..."

#### **Bastak Laboratory**

57 Types of Device, 35 Types of Additive



#### **Youtube > Bastak Expert**

<https://www.youtube.com/watch?v=ktEz2PHdDQg&t=10s>

#### **Bastak Factory - 7000 m2**

20.000 instruments in 142 countries



#### **Youtube > Bastak Factory**

<https://www.youtube.com/watch?v=UbtWWHEbLy4>



**You can find all Catalogues and Competitor Comparison Tables in this link:**

[https://drive.google.com/drive/folders/1\\_4aXqljmISG0Gi7c0KeMuPAGWqvi65mT](https://drive.google.com/drive/folders/1_4aXqljmISG0Gi7c0KeMuPAGWqvi65mT)



Sensitive  
Nutrition



High  
Efficiency



Monoblock  
Study Body



Standard  
Grinding



Personal  
Security

*\*The information in this document is subject to change without any prior notice or obligation on the part of the manufacturer and should not be construed as a commitment by the manufacturer. The manufacturer assumes no responsibility for any errors that may appear in this document.*