



# DUAL ENZYMAKS FALLING NUMBER

Falling Number device used to  
designate the alpha amylase  
activity for the whole grain  
and flour samples

ISO  
9001:2015  
REGISTERED

CE



Made in  
*Türkiye*



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Falling number 80



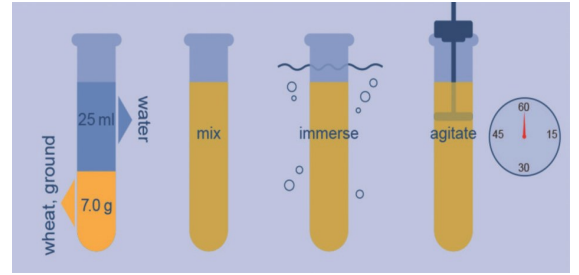
Falling number 260



Falling number 450

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Dual-enzymaks device is used to designate both the natural and the total (microbiological + natural) alpha amylase enzyme activity of the grain. There are three options consisting of FN, FN (meal) and FFN in the Dual-enzymaks interface software. The device has a capacity of two tubes and is designed to analyse falling number (FN). Falling number analysis method is conducted by dropping the uniquely design metal rod into the tube which is placed in bath water cauldron and in which the flour and water is mixed, and the duration of the rod to reach the bottom of the tube is calculated.

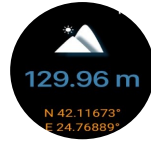


Dual-enzymaks device consists of multiple mechanically complex parts which work together. These parts working in sync and without fault, positively impacts the mechanical endurance and analysis results. Design of the device has been made by our engineers who are experienced in this field with highest quality mechanical modelling methods. Design of the Pro-glutomaks device is registered to Turkish Patent Office.



### Electronical Float

Bath of the Dual-enzymaks device is equipped with glass water indicator and electronical water float. If the water level inside the bath is lower than the required amount for testing, with the data received from electronical float, visual and audio warnings appear on the screen. If the bath does not have enough water, interface will not permit to start the analysis. However, after completing the water deficiency in the bath, device enters active mode for analysis. Additionally, with glass water indicators placed on Dual-enzymaks device, users can monitor the water levels inside the bath.



### Automatic Elevation Correction

Elevation value is an important factor for the correction of analysis results. There are two options, manual and automatic, to enter the elevation value into the Dual-enzymaks device screen. If the automatic mode is selected from the screen, barometric sensor located in the motherboard of the device is activated and it calculates the elevation of the location automatically. If the manual mode is selected, user can enter the elevation value in meters or in feet. Results of all the conducted analysis will be corrected according to this value later on. After the analysis is complete, both on the screen and in the printer extract, corrected data, in addition to the uncorrected raw data, is provided.



### Power Supply (SMPS)

Voltage changes are events frequently encountered in factories and if such changes are not controlled, they can damage electronical devices. Switched power supplies which are used in Dual-enzymaks device, in addition to their high efficiency and high performance, also protect the device against voltage changes between 100-240 voltages. This in turn extends the lifespan of the components and decreases technical maintenance and repair costs.



### Thermal Printer

Thermal Printer is placed in the chasis of the Dual-enzymaks device and has a compact design. Interface of the printer works integrated with the software and required calibrations can be made on the screen. Thanks to this feature, after each analysis or records belonging to the past analysis, can be extract and archived by touching a single button on the screen.



### ARM Processor

All electronical components of Dual-enzymaks device have been chosen from high performance components in accordance with contemporary technology. For screen and control boards, processors strengthened with ARM technology have been chosen and are produced with SMD method. ARM processors are designed to conduct a decreased number of computer orders, therefore, they can work fast by conducting millions of orders in a single second. This system which meets the contemporary technology requirements, are equipped in all of our products.



### Safety

Analysis conducted on Dual-enzymaks device starts with the closing of safety lid. For the safety of the user, interface will not allow user to conduct analysis until the safety lid is closed. Safety lids is produced from transparent materials and can easily be monitored by the user during the analysis process.



### Integrated Memory

With the integrated memory of the interface software of Dual-enzymaks device, results of each conducted analysis are automatically recorded. Up to 100 previous analysis results can be archived in the interface and when required, they can be printed from the printer.

## Ease of Use

Dual-enzymaks device is reliable, fast, easy to use simple device with easy to analyse the results. Coloured touch screen can be calibrated to required angles between 0 and 90 degrees. Cable connection of the screen is socketed and it can easily be plugged and unplugged when necessary. Dual-enzymaks screen interface has been designed with a user friendly perspective. In order to easily monitor the analysis processes, it has the feature of warning the user with visual and audio warnings at each phase. There are three options consisting of FN, FN (meal) and FFN in the Dual-enzymaks interface software. Depending on which mode is chosen, water inside the boiler is heated to the required levels and written and audio warnings are given.

Interface software will not allow users to conduct analysis if there isn't enough water in the boiler or its temperature is not at the desired level. Additionally, with a single button on the screen, sample amount can be calculated, results can be corrected according to humidity, alligation mixture rate can be calculated, elevation level can be entered, samples can be named and recorded results can be printed.

**Error Identification System**, helps the user in regards to both software and mechanical features working correctly. In the settings page located on the screen of the pro-glutomaks device, engine and selenoids can be started with the purpose of controlling them. Independently starting the Engine and the Selenoids ensures that the sensors and the device is calibrated. Additionally, water amount provided for each washing device and washing durations can be digitally calibrated from this page. In case of device calibration and sensors required to be passive, it is possible to deactivate the sensors from a single touch in this page.



### Accessories

All materials required for Falling Number analysis; Analysis tubes, tube stand, printer paper, potato starch, pipette, pipette pump and solution bottle are provided to users free of charge.



### Coolmaks (optional)

For the FN and FN (meal) analysis made at the level of boiling temperature of the water, in order to prevent water loss through evaporation and prevent it from leaking outside the device, boiler lid in other devices is cooled with city water. Maxwell Corporation, with its client based working principle, has developed Coolmaks device to eliminate this problem. Coolmaks does not occupy a great space in the labs and can be installed to the back of the device or can be used on a desk. It uses 500 ml of water it stores in its pump tank to cool the boiler lid without requiring city water. Coolmaks is an optional device which is recommended to be used with Dual-enzymaks.



### Tubemaks (optional)

Tubemaks apparatus is used for fast and practical washing of tubes after falling number analysis. Thus, water consumption and time savings are achieved.



### Shakemaks (optional)

In the fall number analysis, the shaking style and time of the tubes are the most important parameters and greatly affect the analysis results. With the Shakemaks device, the tubes are always shaken for the same time and at the same speed. Shakemaks device is an optional device recommended to be used with Dual-enzymaks.



### Recommended Equipment

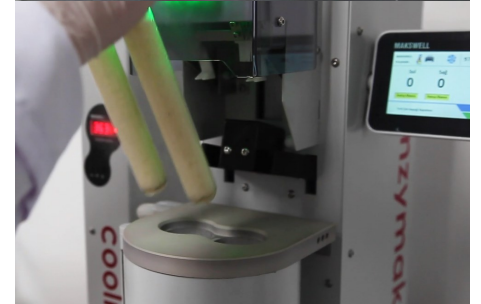
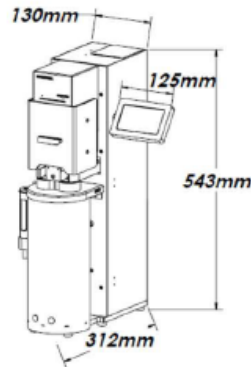
Grain needs to be grinded and turned into dust in order to be used in Falling Number analysis. Grain must be grinded with standard and correct methods, otherwise there maybe irregularities with the values. For that, hammer mill (Hamermaks) or roller mill (Rolermaks) devices produced by Makswell in accordance with the standards must be used.

### TECHNICAL SPECIFICATIONS

|                                      |                                          |
|--------------------------------------|------------------------------------------|
| Voltage :                            | 110-230 V , 50/60 Hz                     |
| Power :                              | 1050 W                                   |
| Dimensions (width, length, height) : | 312x130x543 mm                           |
| Weight :                             | 18 kg                                    |
| Analysis Time :                      | < 15 minute                              |
| Sample Type :                        | Wheat Flour and Whole Wheat Flour (meal) |
| Measured Parameter :                 | FN, FN meal, FFN                         |
| Sample quantity :                    | ~ 7 gr                                   |
| Analysis Capacity :                  | 2 samples                                |
| Analysis Result Range :              | 60-600                                   |
| Screen :                             | 4.3" - 272x480 renkli TFT                |
| Operating temperature range :        | 10 - 45 °C                               |
| Guarantee :                          | 2 Years                                  |
| Spare Parts Guarantee :              | 15 Years                                 |
| Standards :                          | ICC/No. 107/1, AACC/No. 56/81            |



Heat Treated Wooden Case Packaging



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