

ARD AZMALIAN
Engineering Co
(Knowledge-Based)





About us

Dr. Seyed Ahmad Heydari, with more than 30 years of experience in the flour and bread industry , in 2012 with the aim of designing and producing up-to-date quality control and rheology devices for flour and bread industry laboratories and improving the quality of products factories officially established Ard Azmalian Engineering Company.

The company first commenced its business by producing and localizing technology of Gluten-Washer and Gluten-Index devices ;with continuous efforts of the R&D unit which is based on the knowledge and expertise experts in the field. of design, hardware, software and artificial intelligence ;almost every year localizes and redesigns a new machine ; producing reasonable devices , consulting services and after sales services .



Falling Number device (enzyme meter)

Falling Number device automatically determines the amount of activity of alpha amylase enzyme. This device can measure natural enzyme activity or simultaneously determine microbial and natural activity of the enzyme.

The Ard Azmalian Falling Number Device is designed adjustably so that after entering the height from the sea level by the user, the device automatically adjusts the boiling point of water and as long as the tank temperature does not reach this value, it doesn't allow the test to be performed and as soon as the right temperature is obtained the device announces testing time. In addition to safety, warning sign stating the water level in the tank is lower than the specified height appears on the screen.



Laboratory mill machine

To do almost all the experiments on flour, wheat must first be completely ground without much change in humidity; Therefore, a special high-speed mill is needed with its internal anti-wear parts. Laboratory milling machine of Ard Azmalian Engineering Company features high speed, anti-wear parts, good quality and negligible noise.





Texture Analyser device

Tissue testing is an established technique for evaluating mechanical and physical properties of constituents of raw materials, food structure and quality control before and after baking. To perform this experiment the Texture Analyser is used. This device allows tissue testing to be performed for a wide range of a variety of foods such as baked products, cereals, legumes, ingredients of confectionery, dairy products, fruits, vegetables, gelatins, meat, poultry, fish, pasta, and even pet food. Tissue analysis can be done using mechanical methods based on force. In this test, standard tests such as compressing and bending are applied and it is also used to measure hardness, brittleness, softness, stickiness, softness, adhesiveness and other similar properties.

Measurement of these properties other than flour and food industries, are used in other industries such as drug production, gels and the like. The final parameters of this test have been gained through customer feedbacks and extensive tissue experiments including:

Hardness, elasticity and flexibility and the possibility of chewing and sticking.

Extenso Test

Extenso test device measures tensile strength and elasticity of dough, as a result the optimal rheology can be obtained which contributes to the best baking results. This device allows you to specify the following:

1. To determine the elastic value of the dough
2. Resistance of dough against tension
3. To obtain reliable results on how to bake dough
4. To determine the effects of adding additives, the properties of rheology of every flour and specifying it for every user.



Flour Test

Flour test device measures special features of flour and its main use is to measure viscosity of a mixture of flour and water. The following can be determined using Flour test device results:

- Water absorption
- Viscosity of dough containing the maximum ratio of water to gluten
- Maximum mixing time to achieve gluten water absorption
- Stability of the dough under the mix
- Gluten resistance of dough

Flour and bread specialists also use the Flour test device to be able to obtain the properties of flour; by this device necessary changes in the flour-making process and the preparation of flour for different baked goods are determined. Also this device is used to prepare dough for extenso-test test. Flour test device of Azmalian Flour Engineering Company, using artificial intelligence is able to determine the quality of hardness and type of

wheat to produce different flours and define characteristics such as water absorption, processing time, stability and degree of softening of the dough.



Extenso Test Plus device

Extenso test device using artificial intelligence made by Ard Azmalian Engineering Company, in addition to having specifications of a typical extenso test device can also determine the following:

- Simulation of dough fermentation time for baking and close results to reality
- The possibility of using it for all types of wheat flour
- Measurement of rheological properties
- Determining the effect of the combination of wheat and cereals
- Determine the effect of additives
- Possibility of more advanced analyzes such as the status of a producer of wheat relative to time
- Specialized statistical analysis



Gluten Index Machine

After the amount of gluten is determined by the gluten washing machine, its quality must also be determined because it is an important factor in baking; for this test the Gluten index device can be used mechanically, it separates the slipping gluten (gliadin) from gluten with the non-slip structure (glutenin) and calculates a number which is called "index". Percentage of this number is directly related to the quality of gluten flour for different baking, Gluten Index device made by specialized engineers Ardazmalian Engineering Company, in addition to high quality (testing at a rate of one minute at a speed of 6000 rpm).



Gluten washer

To determine the amount of gluten in wheat or flour, by a mechanical system under consistent conditions of temperature, pressure and water, gluten is separated from flour. The gluten-free machine is used for this purpose.

The automatic gluten washing machine of Ard Azmalian Engineering Company, in about 5 minutes using 300 cc of distilled water containing 2% NaCl does washing simultaneously on two samples of flour and separates gluten from them. In addition, this device allows changing parameters such as mix time and washing so that the user can adjust them depending on the type of wheat.



Hectoliter

Hectoliter weight or test weight is used to determine the efficiency of flour from wheat and the uniformity of the grains. This method of analysis known as 1000 Weight Grain is expressed in kilograms per 100 liters of wheat. With this simple method, the quality of wheat is determined.



Gluten dryer

After separating the gluten and placing it in "the Gluten dryer "or glomatic device, under controlled temperature, wet gluten is converted to dry gluten and thus real weight of Gluten is obtained without the water in it.





Microfeeder device

To add premixes or other improvers to flour, Micro feeder is used. This device includes a mechanical part and one electrical panel; controls are performed by a touch screen. If the product line contains scales, the machine can be attached to the scale and based on the weight measured, the Micro feeder is adjusted. In the absence of the scale, the flour flow meter is installed in the production path and based on the production load, performance of the Micro feeder is adjustable.

Sedimentation device (Zeleni)

Sedimentation machine to improve the quality of flour and bread, measures aging rate and quality of sample flour and wheat proteins. This device with its advanced design makes it possible for the user during a test period to check both normal and expected sedimentation. The latest and most up-to-date options have been considered in designing this device. The device has a color screen which allows users to:

1. Observe the test time
2. Determine the desired amount of time for the test
3. Regulations related to normal and expected sedimentation



Moisture Analyser

A fast and reliable device to evaluate the moisture content of wheat flour, flour of other cereals, or any powdery sample.

_The amount of humidity is calculated based on percentage with two digits after the decimal point.

_The weight of the sample can be between 3 and 6 grams, which can be adjusted.

_The humidity level can be measured from zero to 100% (pure water). _The working time of the device can be adjusted, but normally it works for twenty minutes.

_The temperature range is adjustable from 80 to 120 degrees celsius

_3.5 inch color touch screen

_The accuracy of the scale is one thousandth of a gram

_Saving information and connecting to a computer via WiFi or Bluetooth



NIR

NIR is a diode array NIR spectrometer which can be carried with you wherever you go. You can have the laboratory with you.

You can measure the following quantities with this device:

- _Protein
- _Ash
- _Moisture
- _Strach Damage
- _Sedimentation
- _Water Absorption
- _Gluten





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