

## Animal Food Products



## Application notes

### Wet Pet Food / Feed Stock

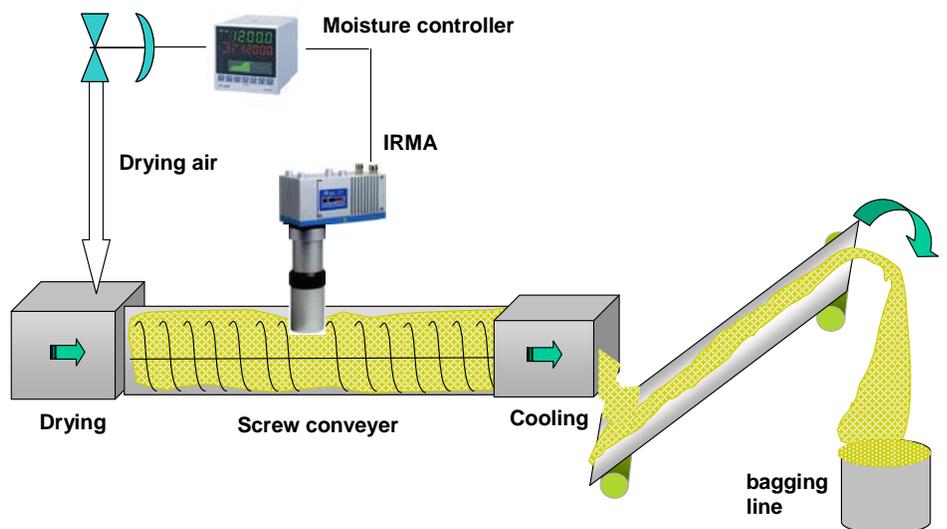
Moisture control for Pet Food is and has been in important roll in the Pet Food and Feed Stock Industries. It controls;

1. Product hardness, palatability, consistency in size and taste,
2. Weight of product, shelf life, and
3. Process efficiency.

CHINO IRMA Series high speed and non-contact measurement system can measure product's moisture content of 15 to 30%, accuracy within +/-0.4% and be utilized to improve product quality as well as manufacturing process efficiency.

CHINO IRMA Series can be used at various stages of the manufacturing process. Specifically determined calibration curve can be used for products that may be in different form, color and temperature from stage to stage and from product to product.

CHINO IRMA Series can be used as stand alone or connected to a PC or DCS plant control system. Both analog (4 to 20mA DC) and digital (RS-485 or LAN Ethernet) outputs are provided. A remote setting display unit, which connects up to 9 detector units, can be used to set various detector functions and also displays measured values.



| Products / Location     | Parameter | Range     |
|-------------------------|-----------|-----------|
| Semi-moist pet food     | Moisture  | 25 to 35% |
| Fish meal (animal feed) | Moisture  | 15 to 40% |
| Wet canned dog food     | Moisture  | 60 to 90% |

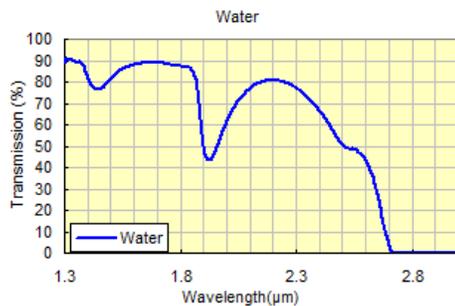
**Recommended model / Item**

- \* General moisture unit  
Model : IRMA1100S Qty : 1
- \* Air purge hood  
Model : IR-WEA Qty : 1
- \* Calibration checker plate  
Model : IR-WEB Qty : 1

**Installation**

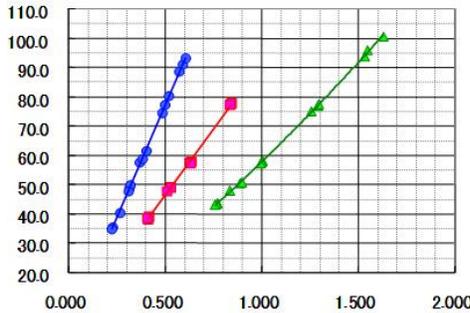
Mount IRMA to make the light beam falls onto the target perpendicularly. Choose locations not to have blades of the screw coming into the spot of measurement. It is recommended to choose locations where the distance between the unit's lens and the target is stable. In case of steam or dust being presence, air purging with filtered instrument air will eliminate any steam or dust coming into the beam path. It is also recommended to conduct periodical "Zero-Calibration".

**Absorption characteristic**



Moisture(water) has a unique infrared absorption spectrum regions. Water absorbs at wavelength of 1.43, 1.94, and 3 micrometers.

**Calibration curve**



Calibration curve is a correlation between moisture determined by customer's reference instrument and IR absorption measured by IRMA.

[Basic sample test for moisture]

1. Prepare samples with various moisture content
  2. Show each sample to IRMA and record absorption level
  3. As conducting step-2, determine moisture level with your reference instrument
  4. Put all data points on a X/Y graph and see if there's a correlation
- Note: Reference instrument may vary depending on the method (by volume or weight).



Mirror type



Fiber type



Liquid cell type



Setting & Display unit



**Contact**

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\* Download application check sheet at. <http://www.chinoamerica.com/products/meters/checksheet>