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A CRISI-NSIC RATED COMPANY  
ISO 9001: 2008 COMPANY  
AFFILIATED TO THE UNIVERSITY OF NOTTINGHAM  
MEMBER OF AMICAL

**DATE:26/03/2017**

**PROCESS:** Dehydration of Grapes.

**PROCEDURE:**

1. For this trial, remove all the stems of grapes and wash them with cool water.
2. Prepare a dipping emulsion of Potassium carbonate and dipping oil as follows:  
5 litres of water + 125 gms of Potassium carbonate + 75 ml of Dipping oil  
Stir this solution continuously so as to not form precipitate of it.
3. Then treat the grapes with this dipping emulsion for about 5 minutes.
4. Take out grapes from emulsion and take weight and note it as initial weight.
4. Then place all the grapes on the tray to dehydrate it.
5. Set temperature of dehydrator at 75°C and make observations.
6. During this process, observations are made after every 1 hour by checking the moisture loss on drying in grapes, by taking weight and by taking pictures.

**TRIAL SETUP:**



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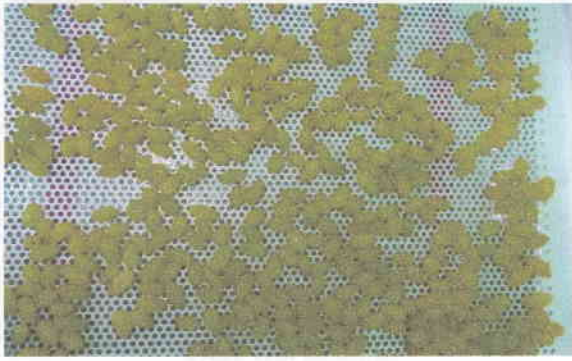
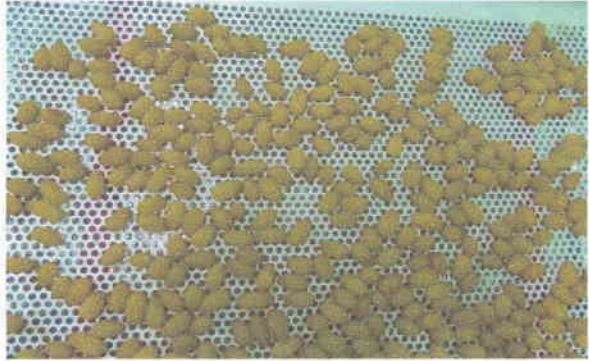


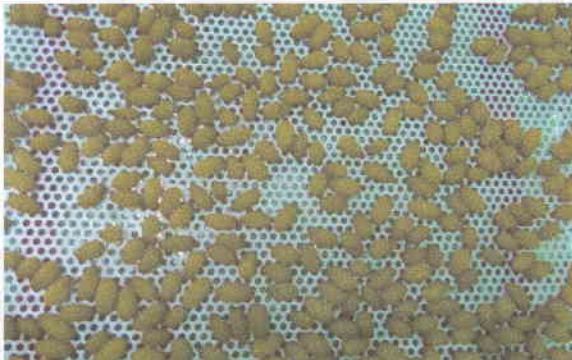

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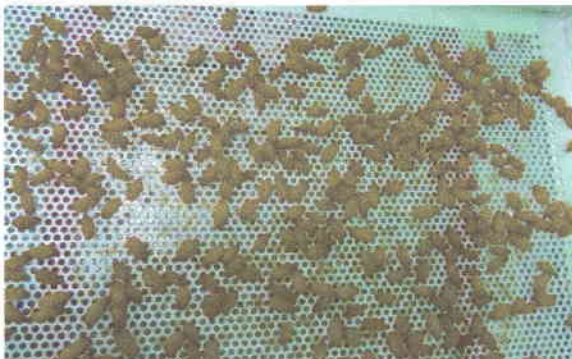
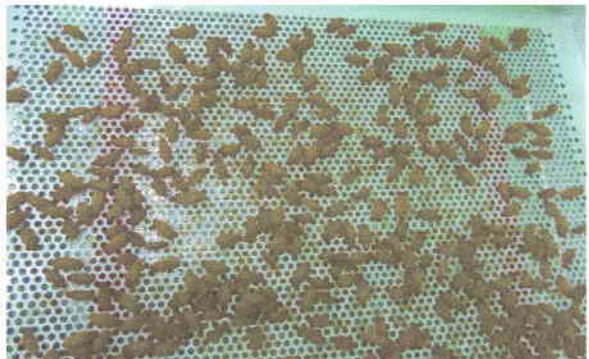


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**TRIAL READINGS AND PICTURES:**

	
Before Dehydration	After 60 minutes
Initial weight : 800 grams	Weight taken: 664 grams

	
After 120 minutes	After 180 minutes
Weight taken: 527 grams	Weight taken: 417 grams

	
After 240 minutes	After 300 minutes
Weight taken: 323 grams	Weight taken: 259 grams

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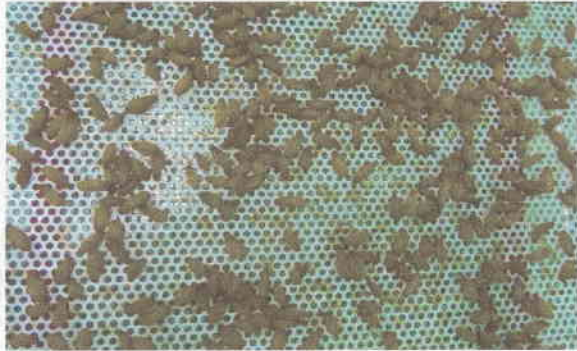



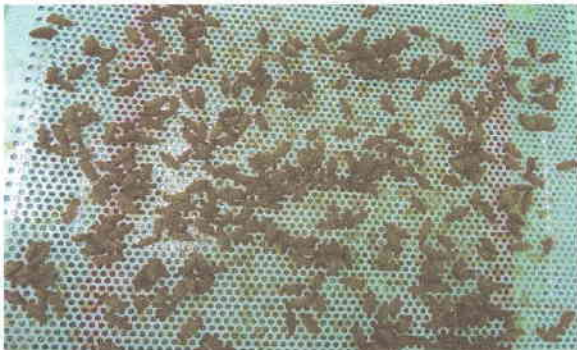
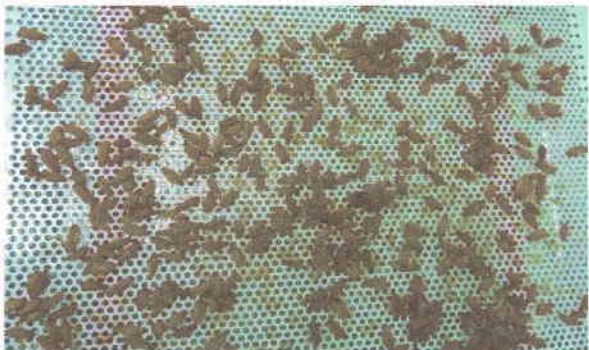


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After 360 minutes Weight taken: 223 grams	After 420 minutes Weight taken: 200 grams

	
After 480 minutes Weight taken: 196 grams	After 540 minutes Weight taken: 194 grams

**OBSERVATIONS:**

1. The process of dehydration is completed at 75°C for 540 minutes as there is so less weight loss after 480 minutes.
2. After 60 minutes, the green colour of grapes started getting dark and after complete dehydration it completely became brown.
3. The total weight loss in grapes is 606 grams, i.e., out off 800 grams only 194 grams remain.
4. It shows approximately 76% weight loss of grapes in 540 minutes, i.e., in 9 hours at 75°C.
5. Following are the before and after pictures of dehydration process.

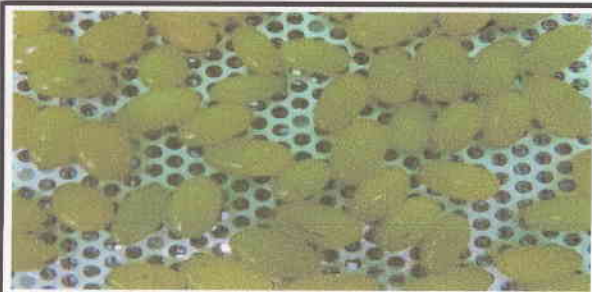
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Before Dehydration



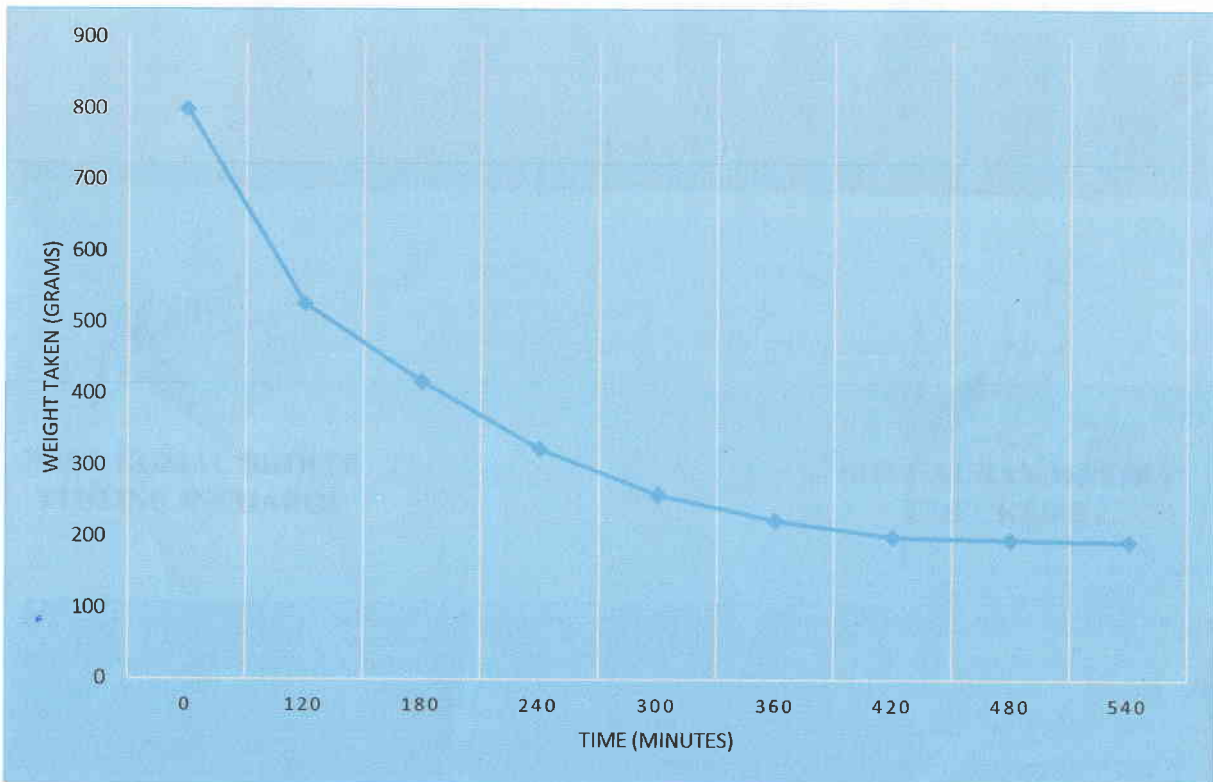
After Dehydration

**LINE GRAPH AND BAR DIAGRAM SHOWING MOISTURE LOSS ON DRYING:**

Following presentation of line graph and bar diagram illustrates the moisture loss on drying in grapes by showing weight taken against different intervals of time.

The line graph shows the weight of grapes decreases over the period of time interval and in bar diagram, the numbers on bar indicates the weight of grapes taken at that time interval.

**1. Line Graph:**



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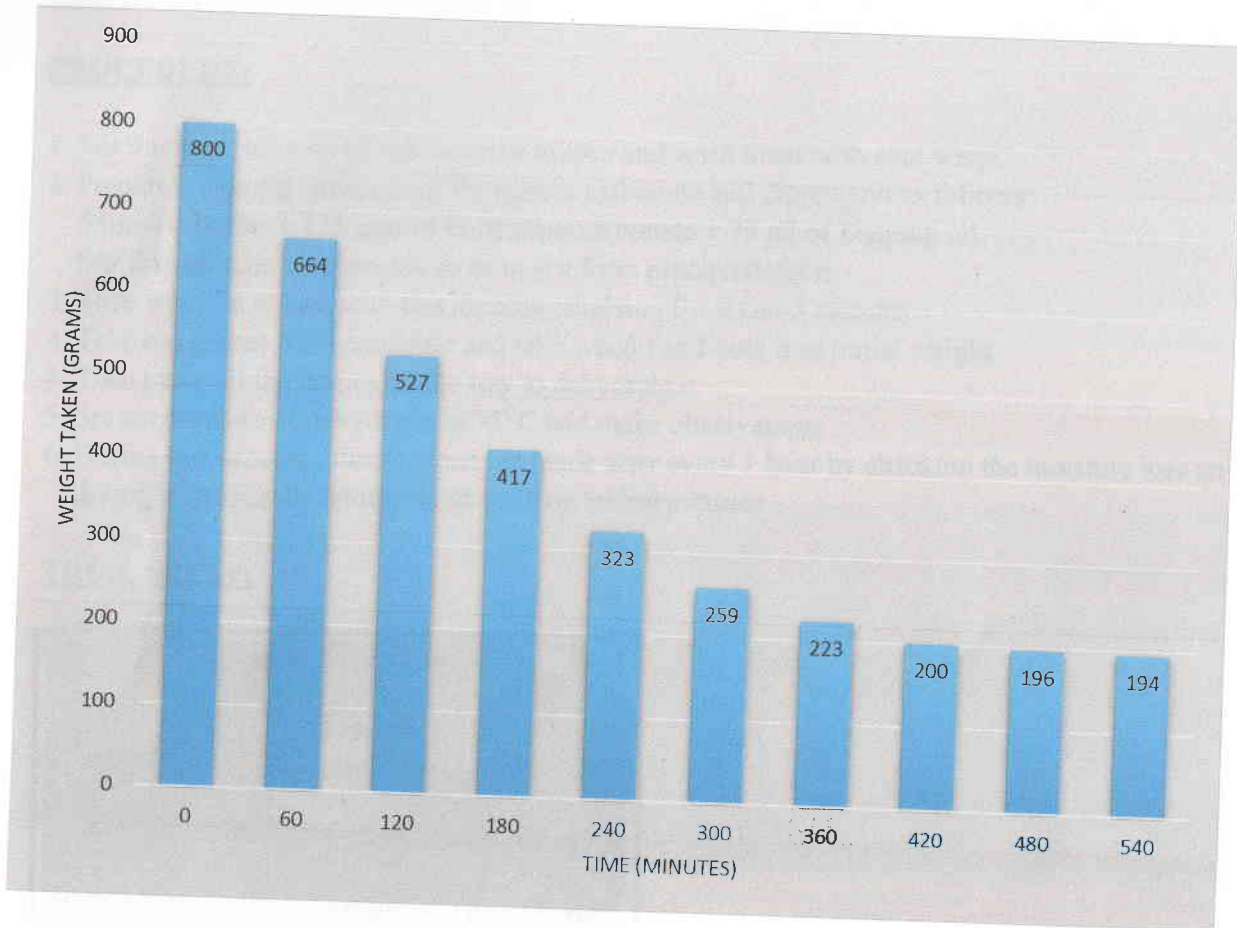


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2. Bar Diagram:



*K Komal*

**MISS. KOMAL BHOITE  
TESTING INCHARGE**

**MR. GAURAV MESTRY  
CHECKED BY**

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