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

DATE:07/03/2017

PROCESS: Dehydration of Oranges.

PROCEDURE:

1. For this trial, oranges are peeled and then chopped in slices of about 10-15 mm of thickness.
2. Then drying is done in dehydrator with side draft at temperature of 65°C.
3. During the process, observations are made after every 60 minutes by checking the moisture loss on drying in oranges, by taking weight and by capturing pictures.

TRIAL SETUP:



TRIAL READINGS AND PICTURES:

<p>Before Dehydration Process</p>	<p>After 60 minutes</p>
<p>Initial Weight: 580 grams</p>	<p>Weight taken: 334 grams</p>

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After 120 minutes

Weight taken: 237 grams



After 180 minutes

Weight taken: 141 grams



After 240 minutes

Weight taken: 100 grams



After 300 minutes

Weight taken: 80 grams



After 360 minutes

Weight taken: 72 grams



After 420 minutes

Weight taken: 72 grams

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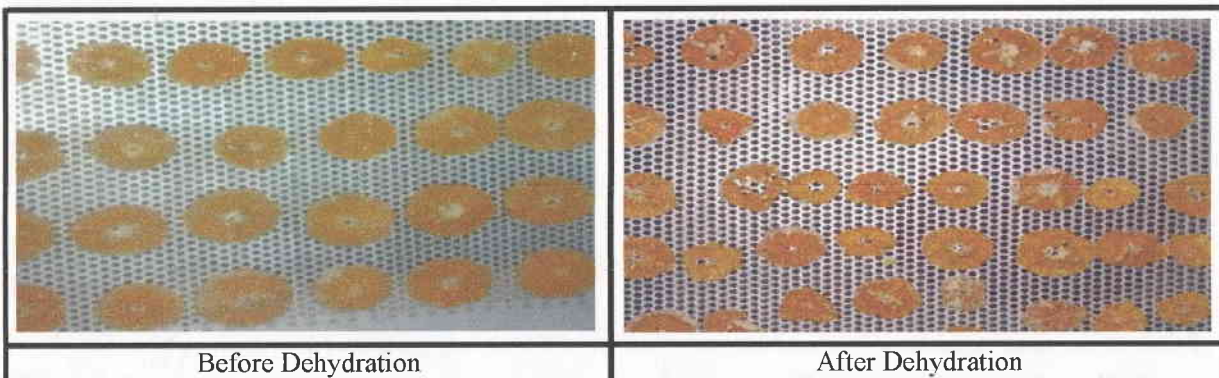
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OBSERVATIONS:

1. After 420 minutes, weight taken is same as that of after 360 minutes. Hence, after 360 minutes at 65°C the process of dehydration is completed as there is no weight loss after 360 minutes.
2. The total weight loss in oranges is 508 grams, i.e., out off 580 grams only 72 grams remain.
3. It shows approximately 87% weight loss of oranges in 360 minutes, i.e., in 6 hours at 65°C.
4. Following are the before and after pictures of dehydration process.

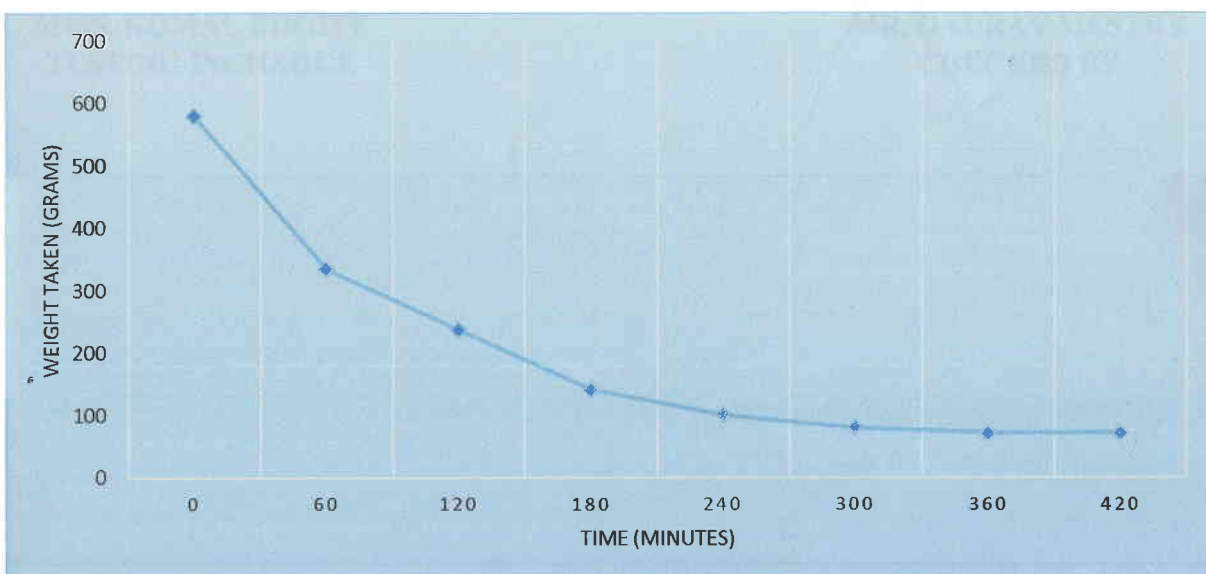


LINE GRAPH AND BAR DIAGRAM SHOWING MOISTURE LOSS ON DRYING:

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

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

1. Line Graph:





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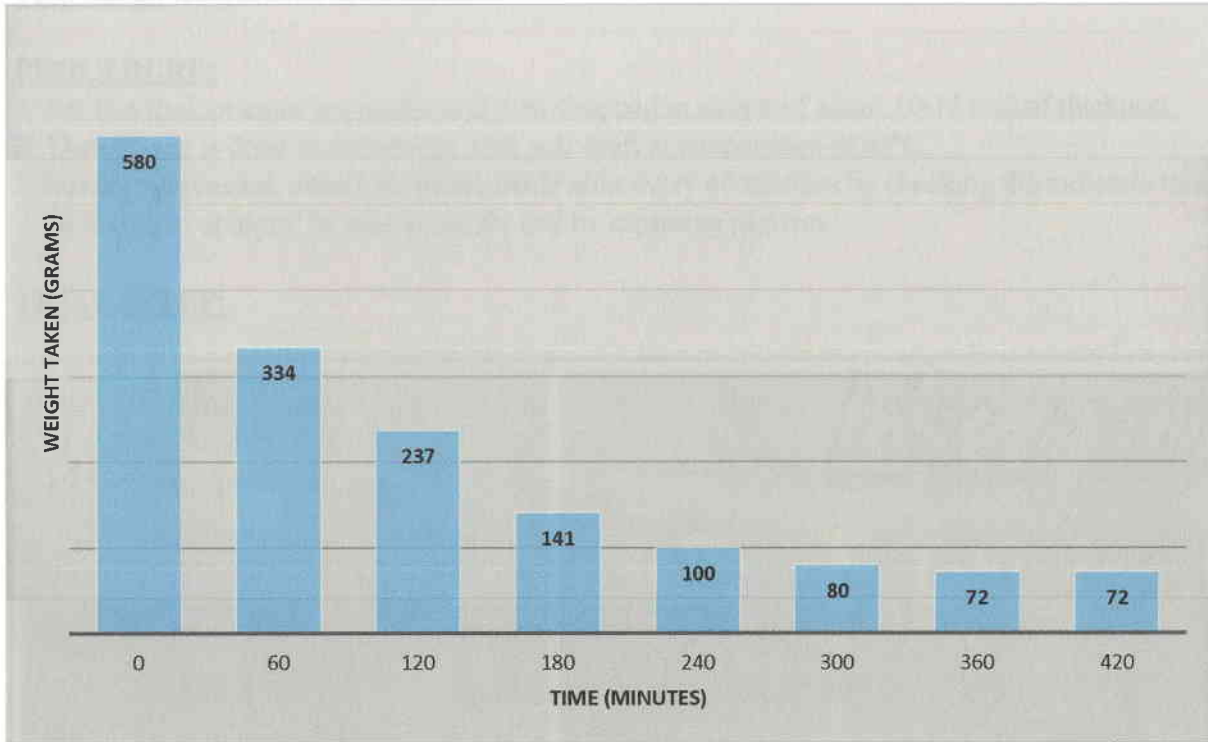


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2. Bar Diagram:



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