



A CRISIL-NSIC RATED COMPANY
ISO-9001-2008 COMPANY

Member Of



AIMCAL(USA)



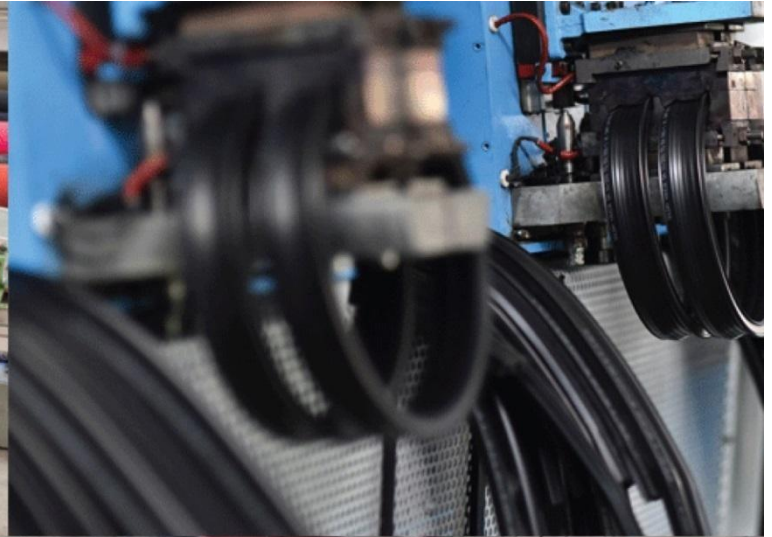
A.M.P.E.R.E(EUROPE)

In Association With



ELECTRO MAGNETIC innovative technologies

Kerone Research & Development Centre (KRDC),
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506, India
Tel- +91-251-2620542/43/44/45/46, Email-info@kerone.com, www.kerone.com



**Batch Convection Heat Treatment for
Drying of Vegetables**

ISO 9001-2008 | ISO 9001-2015 | EMS 14001 | OHSAS 18001
In Association with SVCH-Technology, Moscow (Russia)



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506, India
 Tel- +91-251-2620542/43/44/45/46, Email-info@kerone.com, www.kerone.com

Customer :	M/s. AAA CONCEPT PVT. LTD
Process :	Batch Convection Heat Treatment for Drying of Vegetables

TEST REPORT No: 47/KRDC/LAB/57 Mum 23/10/2021

Date Sample reception : 23/10/2021

ID : 47/LAB/57

SAMPLE DESCRIPTION:

Sampling : As Requested

Sample Condition : Acceptable

Quantity : 1 plate each

Samples opening date : 23/10/2021

Product : Vegetables like Ladyfinger, Spinach, Carrot, Onion, Bottle gourd, Tomato, Potato & Garlic

Start Date test : 23/10/2021

End Date test : 25/10/2021

LABORATORY EXPERIMENTAL SETUP:

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506, India
 Tel- +91-251-2620542/43/44/45/46, Email-info@kerone.com, www.kerone.com

LAB BATCH CONVECTION HEATING SYSTEM SPECIFICATIONS:

Heating Zone (width*height*depth)	510*480*410 mm
No. of Heaters	6
Total Heater Power	6 kW
Motor	0.5 HP
No. of trays	6
Tray size (width*height*depth)	560 x 435 x25
Centrifugal Exhaust Blower	1440 rpm

ENVIRONMENT-LABORATORY AMBIENT CONDITIONS:




Temperature (°C)	30°C (±5°C)
Humidity (%)	≤68% RH
Pressure (kN/m ² or kPa)	Not recorded

Note for recommendation: Environmental conditions have a direct impact on test results. Accuracy and consistency of test data are affected by the laboratory conditions



Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506, India
Tel- +91-251-2620542/43/44/45/46, Email-info@kerone.com, www.kerone.com

EQUIPMENTS USED:

Name of Equipment	Picture of Equipment	Specifications
Compact Thermal Imaging Camera		Model: FLIR E-30 Resolution: 160x 120 IR Thermal sensitivity of 0.10°C
Moisture Analyzer		Make: Axis Balance Description: Moisture range: 1%(sample 0.02/0.05g), 0.1% (Sample 0.5/5g), 0.01%(Sample>5g)
Thermo Hygrometer		Model No: HTC-2 Temperature accuracy: $\pm^{\circ}\text{C}$ (1.8°F) Temperature resolution: 0.1°C (0.2°F) Humidity range: 10%~99% RH Humidity accuracy: $\pm 5\%$ RH Humidity resolution: 1% RH

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506, India
Tel- +91-251-2620542/43/44/45/46, Email-info@kerone.com, www.kerone.com

SAMPLE PREPARATION AND METHOD/PROCEDURE:

The experiment has been performed on Vegetables like Ladyfinger, Spinach, Carrot, Onion, Bottle gourd, Tomato, Potato, Cauliflower & Garlic to speed up the drying rate. For this experimental run, given sample has been placed on a perforated tray and then placed in Horizontal Batch Convection Oven at certain decided temperature and time cycle. Observations are made on the final moisture content of sample, weight and appearance of product.

ANALYTICAL RESULTS:

TRIAL-1: LADYFINGER (BHINDI)

Initial Wt. - 48 g

Initial moisture – 85.1%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(42-45)°C	Variant of Drying
2	After 4 Hr 30 min	(50-55)°C	Dried as desired; Colour retained

Final Weight: 10g

Final Weight loss in %: 79.16%

Final Moisture content: 5.5%

Total cycle time- 4Hrs 30min



ELECTRO MAGNETIC innovative technologies



A CRISIL-NSIC RATED
COMPANY ISO-9001-2008

Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:



BEFORE



AFTER

MOISTURE ANALYSIS REPORT:

Drying started	Drying started
Date :25-10-2021	Date :25-10-2021
Time :16:38:38	Time :11:56:24
Model:AGS200	Model:AGS200
Serial number : 138	Serial number : 138
Drying parameters	Drying parameters
Product : 0	Product : 0
Drying temperature : 105.0 °C	Drying temperature : 105.0 °C
Drying profile : standard	Drying profile : standard
Mode : Short mode	Mode : Short mode
Calculation : ((m0-m)/m0)*100%	Calculation : ((m0-m)/m0)*100%
Finished : 3 samples	Finished : 3 samples
Initial weight : 1.790 g	Initial weight : 0.653 g
Final weight : 0.267 g	Final weight : 0.617 g
Drying time : 00:38:40s	Drying time : 00:04:00s
Sampling interval : 20 sec	Sampling interval : 20 sec
Moisture : 85.1 %	Moisture : 5.5 %
NOTE Initial moisture Lady finger	NOTE Final moisture of Lady finger
The analysis performed by: 0	The analysis performed by: 0
Signature..... <i>Komal</i>	Signature..... <i>Komal</i>

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-2: CARROT

Initial Wt. - 134 g

Initial moisture – 82.5%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(40-43)°C	Variant of Drying
2	After 4 Hr	(45-49)°C	Dried as desired; Colour retained

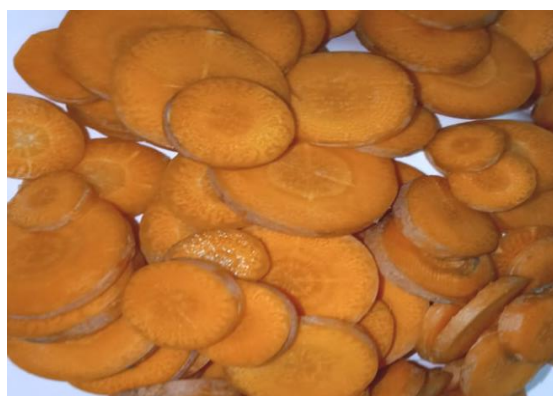
Final Weight: 21g

Final Weight loss in %: 84.32 %

Final Moisture content: 6.4 %

Total cycle time- 4Hrs

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:



Format: F/R&D/01



ELECTRO MAGNETIC innovative technologies



KERONE

A CRISIL-NSIC RATED

COMPANY ISO-9001-2008

Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

MOISTURE ANALYSIS REPORT:

Drying started		Drying started	
Date :25-10-2021		Date :25-10-2021	
Time :14:34:36		Time :15:12:55	
Model:AGS200		Model:AGS200	
Serial number : 138		Serial number : 138	
Drying parameters		Drying parameters	
Product : 0		Product : 0	
Drying temperature : 105.0 °C		Drying temperature : 105.0 °C	
Drying profile : standard		Drying profile : standard	
Mode : Short mode		Mode : Short mode	
Calculation : $((m_0-m)/m_0)*100\%$		Calculation : $((m_0-m)/m_0)*100\%$	
Finished : time over		Finished : 3 samples	
Initial weight : 2.696 g		Initial weight : 0.970 g	
Final weight : 0.473 g		Final weight : 0.908 g	
Drying time : 01:00:00s		Drying time : 00:09:40s	
Sampling interval : 20 sec		Sampling interval : 20 sec	
Moisture : 82.5 %		Moisture : 6.4 %	
NOTE Initial moisture of Carrot		NOTE final moisture of Carrot	
The analysis performed by: 0		The analysis performed by: 0	
Signature: Komal		Signature: Komal	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-3- SPINACH

Initial Wt. - 40 g

Initial moisture – 90.5%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(40-42)°C	Variant of Drying
2	After 3 Hr	(40-45)°C	Dried as desired; Colour retained

Final Weight: 10g

Final Weight loss in %: 75.0 %

Final Moisture content: 10.0%

Total cycle time- 3Hrs

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:





ELECTRO MAGNETIC innovative technologies



A CRISIL-NSIC RATED
COMPANY ISO-9001-2008

Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

MOISTURE ANALYSIS REPORT:

Drying started		Drying started	
Date :25-10-2021		Date :25-10-2021	
Time :12:32:11		Time :15:16:08	
Model:AGS200		Model:AGS200	
Serial number : 138		Serial number : 138	
Drying parameters		Drying parameters	
Product : 0		Product : 0	
Drying temperature : 105.0 °C		Drying temperature : 105.0 °C	
Drying profile : standard		Drying profile : standard	
Mode : Short mode		Mode : Short mode	
Calculation : $((m0-m)/m0)*100\%$		Calculation : $((m0-m)/m0)*100\%$	
Finished : 3 samples		Finished : 3 samples	
Initial weight : 1.637 g		Initial weight : 0.309 g	
Final weight : 0.156 g		Final weight : 0.278 g	
Drying time : 00:21:40s		Drying time : 00:01:40s	
Sampling interval : 20 sec		Sampling interval : 20 sec	
Moisture : 90.5 %		Moisture : 10 %	
NOTE Initial moisture of Spinach.		NOTE final moisture of Spinach.	
The analysis performed by: 0		The analysis performed by: 0	
Signature..... <i>Komal</i>		Signature..... <i>Komal</i>	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-4: BLANCHED SPINACH {EMERSED INTO HOT WATER [(70-80) °C] FOR 2 MINUTES}

Initial Wt. - 65 g

Initial moisture – 90.5%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(38-42)°C	Variant of Drying
2	After 3 Hr 30min	(40-47)°C	Dried as desired; Colour retained

Final Weight: 12 g

Final Weight loss in %: 81.53 %

Final Moisture content: 11.0%

Total cycle time- 3Hrs 30min

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:





Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

MOISTURE ANALYSIS REPORT:

Drying started		Drying started	
Date :25-10-2021		Date :25-10-2021	
Time :12:32:11		Time :15:16:08	
Model:AGS200		Model:AGS200	
Serial number : 138		Serial number : 138	
Drying parameters		Drying parameters	
Product : 0		Product : 0	
Drying temperature : 105.0 °C		Drying temperature : 105.0 °C	
Drying profile : standard		Drying profile : standard	
Mode : Short mode		Mode : Short mode	
Calculation : $((m_0-m)/m_0)*100\%$		Calculation : $((m_0-m)/m_0)*100\%$	
Finished : 3 samples		Finished : 3 samples	
Initial weight : 1.637 g		Initial weight : 0.309 g	
Final weight : 0.156 g		Final weight : 0.278 g	
Drying time : 00:21:40s		Drying time : 00:01:40s	
Sampling interval : 20 sec		Sampling interval : 20 sec	
Moisture : 90.5 %		Moisture : 10 %	
NOTE Initial moisture of Spinach.		NOTE final moisture of Spinach.	
The analysis performed by: 0		The analysis performed by: 0	
Signature..... <i>Komal</i>		Signature..... <i>Komal</i>	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-5: SLICED TOMATO {5mm THICK}

Initial Wt. - 190 g

Initial moisture – 94.0 %

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(40-43)°C	Variant of Drying
2	After 4 Hr 30min	(40-48)°C	Dried as desired; Colour retained

Final Weight: 15 g

Final Weight loss in %: 92.10 %

Final Moisture content: 13.4%

Total cycle time- 4Hrs 30min

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:





ELECTRO MAGNETIC innovative technologies

A CRISIL-NSIC RATED
COMPANY ISO-9001-2008Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India**MOISTURE ANALYSIS REPORT:**

Drying started		Drying started	
Date :25-10-2021		Date :25-10-2021	
Time :17:56:45		Time :12:07:15	
Model:AGS200		Model:AGS200	
Serial number : 138		Serial number : 138	
Drying parameters		Drying parameters	
Product : 0		Product : 0	
Drying temperature : 105.0 °C		Drying temperature : 105.0 °C	
Drying profile : standard		Drying profile : standard	
Mode : Short mode		Mode : Short mode	
Calculation : $((m_0-m)/m_0)*100\%$		Calculation : $((m_0-m)/m_0)*100\%$	
Finished : 3 samples		Finished : 3 samples	
Initial weight : 3.623 g		Initial weight : 0.674 g	
Final weight : 0.217 g		Final weight : 0.584 g	
Drying time : 00:48:00s		Drying time : 00:09:20s	
Sampling interval : 20 sec		Sampling interval : 20 sec	
Moisture : 94.0 %		Moisture : 13.4 %	
NOTE Initial (Tomato)		NOTE final moisture of Sliced Tomato	
The analysis performed by: 0		The analysis performed by: 0	
Signature..... <i>Komal</i>		Signature..... <i>Komal</i>	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-6: BOTTLE GOURD SLICED {5mm thick}

Initial Wt. - 180 g

Initial moisture – 86.6%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(41-42)°C	Variant of Drying
2	After 3 Hr 30min	(45-47)°C	Dried as desired; Colour retained

Final Weight: 14 g

Final Weight loss in %: 90.0 %

Final Moisture content: 10.3%

Total cycle time- 3Hrs 30min

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:





ELECTRO MAGNETIC innovative technologies



KERONE

A CRISIL-NSIC RATED

COMPANY ISO-9001-2008

Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

MOISTURE ANALYSIS REPORT:

Drying started		Drying started	
Date :25-10-2021		Date :25-10-2021	
Time :17:08:04		Time :11:43:52	
Model:AGS200		Model:AGS200	
Serial number : 138		Serial number : 138	
Drying parameters		Drying parameters	
Product : 0		Product : 0	
Drying temperature : 105.0 °C		Drying temperature : 105.0 °C	
Drying profile : standard		Drying profile : standard	
Mode : Short mode		Mode : Short mode	
Calculation : $((m_0-m)/m_0)*100\%$		Calculation : $((m_0-m)/m_0)*100\%$	
Finished : 3 samples		Finished : 3 samples	
Initial weight : 0.853 g		Initial weight : 1.277 g	
Final weight : 0.114 g		Final weight : 1.145 g	
Drying time : 00:27:40s		Drying time : 00:09:20s	
Sampling interval : 20 sec		Sampling interval : 20 sec	
Moisture : 86.6 %		Moisture : 10.3 %	
NOTE Initial (Bottle Gourd)		NOTE final moisture (Bottle Gourd)	
The analysis performed by: 0		The analysis performed by: 0	
Signature: <i>Komal</i>		Signature: <i>Komal</i>	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-7: ONION

Initial Wt. - 258 g

Initial moisture – 83.8%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(37-40)°C	Drying starts
2	After 5 Hr	(40-43)°C	Variant of Drying
3	After 8 Hr	(50-60)°C	Dried as desired; Colour retained

Final Weight: 28 g

Final Weight loss in %: 89.14 %

Final Moisture content: 3.4%

Total cycle time- 8 Hours

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:





ELECTRO MAGNETIC innovative technologies



KERONE

A CRISIL-NSIC RATED
COMPANY ISO-9001-2008

Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

MOISTURE ANALYSIS REPORT:

Drying started	
Date	:25-10-2021
Time	:15:59:13
Model	:AGS200
Serial number	: 138
Drying parameters	
Product	: 0
Drying temperature	: 105.0 °C
Drying profile	: standard
Mode	: Short mode
Calculation	: ((m0-m)/m0)*100%
Finished	: 3 samples
Initial weight	: 2.918 g
Final weight	: 0.472 g
Drying time	: 00:41:40s
Sampling interval	: 20 sec
Moisture	: 83.8 %
NOTE Initial moisture of Onion.	
The analysis performed by: 0	
Signature..... <i>Komal</i>	

Drying started	
Date	:25-10-2021
Time	:18:15:07
Model	:AGS200
Serial number	: 138
Drying parameters	
Product	: 0
Drying temperature	: 105.0 °C
Drying profile	: standard
Mode	: Short mode
Calculation	: ((m0-m)/m0)*100%
Finished	: 3 samples
Initial weight	: 1.103 g
Final weight	: 1.066 g
Drying time	: 00:05:00s
Sampling interval	: 20 sec
Moisture	: 3.4 %
NOTE final moisture of Onion	
The analysis performed by: 0	
Signature..... <i>Komal</i>	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

TRIAL-8: GARLIC

Initial Wt. - 25 g

Initial moisture – 49.8%

Setting Temperature: 60°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(35-38)°C	Drying starts
2	After 5 Hr	(40-42)°C	Variant of Drying
3	After 8 Hr 30 min	(50-55)°C	Dried as desired; Colour retained

Final Weight: 9 g

Final Weight loss in %: 64.0 %

Final Moisture content: 2.4%

Total cycle time- 8 Hr. 30min

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:





Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

MOISTURE ANALYSIS REPORT:

Drying started	Drying started
Date :25-10-2021	Date :25-10-2021
Time :13:33:24	Time :18:04:01
Model:AGS200	Model:AGS200
Serial number : 138	Serial number : 138
Drying parameters	Drying parameters
Product : 0	Product : 0
Drying temperature : 105.0 °C	Drying temperature : 105.0 °C
Drying profile : standard	Drying profile : standard
Mode : Short mode	Mode : Short mode
Calculation : $((m_0-m)/m_0)*100\%$	Calculation : $((m_0-m)/m_0)*100\%$
Finished : time over	Finished : 3 samples
Initial weight : 2.311 g	Initial weight : 0.825 g
Final weight : 1.160 g	Final weight : 0.805 g
Drying time : 01:00:00s	Drying time : 00:04:20s
Sampling interval : 20 sec	Sampling interval : 20 sec
Moisture : <u>49.8 %</u>	Moisture : <u>2.4 %</u>
NOTE Initial moisture of Garlic	NOTE final (Garlic)
The analysis performed by: 0	The analysis performed by: 0
Signature: <u>Komal</u>	Signature: <u>Komal</u>

Format: F/R&D/01



TRIAL-9: POTATOES

SAMPLE PROCEDURE FOR PRE-TREATMENT:

- I. Potatoes are cut into cubes as shown in figure.
- II. Later, soaked overnight in water and blanched for two minutes in hot water (80-90) °C.

Initial Wt. - 317g

Initial moisture -81.4 %

Setting Temperature: 55°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Remarks, if any
1	After 2 Hr	(30-35)°C	Drying starts
2	After 4 Hr	(40-42)°C	Variant of Drying
3	After 6 Hr	(48-50)°C	Dried as desired, Texture is Crunchy; Colour retained

Final Weight: 70 g

Final Weight loss in %: 77.77 %

Final Moisture content: 7.1%

Total cycle time- 6 Hr



ELECTRO MAGNETIC innovative technologies



A CRISIL-NSIC RATED
COMPANY ISO-9001-2008

Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:



BEFORE



AFTER

MOISTURE ANALYSIS REPORT:

Drying started	Drying started	Drying started
Date :26-10-2021	Date :26-10-2021	Date :27-10-2021
Time :17:49:47	Time :14:50:15	Time :11:07:10
Model:AGS200	Model:AGS200	Model:AGS200
Serial number : 138	Serial number : 138	Serial number : 138
Drying parameters	Drying parameters	Drying parameters
Product : 0	Product : 0	Product : 0
Drying temperature : 105.0 °C	Drying temperature : 105.0 °C	Drying temperature : 105.0 °C
Drying profile : standard	Drying profile : standard	Drying profile : standard
Mode : Short mode	Mode : Short mode	Mode : Short mode
Calculation : $((w0-m)/w0)*100\%$	Calculation : $((w0-m)/w0)*100\%$	Calculation : $((w0-m)/w0)*100\%$
Finished : time over	Finished : time over	Finished : 3 samples
Initial weight : 3.091 g	Initial weight : 2.585 g	Initial weight : 1.512 g
Final weight : 0.575 g	Final weight : 1.456 g	Final weight : 1.405 g
Drying time : 01:00:00s	Drying time : 00:43:18s	Drying time : 00:18:00s
Sampling interval : 20 sec	Sampling interval : 20 sec	Sampling interval : 20 sec
Moisture : 81.4 %	Moisture : 43.7 %	Moisture : 7.1 %
NOTE Initial (Potato)	NOTE After 3hrs (potato)	NOTE final moisture (potato)
The analysis performed by: 0	The analysis performed by: 0	The analysis performed by: 0
Signature: <i>Komal</i>	Signature: <i>Komal</i>	Signature: <i>Komal</i>

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambarnath (East), Thane- 421 506,
 India

TRIAL-10: CAULIFLOWER

Initial Wt. - 130g

Initial moisture – 87.9 %

Setting Temperature: 55°C

Sr.No	Cycle Time (Hr.)	Product Temp.(°C)	Product Wt. (Grams)	Remarks, if any
1	After 2 Hr	(30-34)°C	80g	Drying starts
2	After 3 Hr	(33-38)°C	52g	Drying starts
3	After 4 Hr	(40-45)°C	43g	Variant of Drying
4	After 5 Hr	(48-53)°C	30g	Dried as desired, Texture is Crunchy; Colour retained

Final Weight: 30 g

Final Weight loss in %: 76.92 %

Final Moisture content: 10.3%

Total cycle time- 5 Hr

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
 B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
 India

BEFORE AND AFTER PICTURES OF TREATED SPECIMEN SAMPLE:



BEFORE



AFTER

MOISTURE ANALYSIS REPORT:

Drying started		Drying started	
Date	:26-10-2021	Date	:27-10-2021
Time	:15:42:22	Time	:11:31:19
Model	:AGS200	Model	:AGS200
Serial number	: 138	Serial number	: 138
Drying parameters		Drying parameters	
Product	: 0	Product	: 0
Drying temperature	: 105.0 °C	Drying temperature	: 105.0 °C
Drying profile	: standard	Drying profile	: standard
Mode	: Short mode	Mode	: Short mode
Calculation	: $((m0-m)/m0)*100\%$	Calculation	: $((m0-m)/m0)*100\%$
Finished	: 3 samples	Finished	: time over
Initial weight	: 1.369 g	Initial weight	: 1.693 g
Final weight	: 0.165 g	Final weight	: 1.512 g
Drying time	: 00:51:00s	Drying time	: 00:23:20s
Sampling interval	: 20 sec	Sampling interval	: 20 sec
Moisture	: <u>87.9 %</u>	Moisture	: <u>10.7 %</u>
NOTE Initial moisture of Cauliflower		NOTE Final moisture of Cauliflower	
The analysis performed by: 0		The analysis performed by: 0	
Signature..... <i>Komal</i>		Signature..... <i>Komal</i>	

Format: F/R&D/01



Kerone Research & Development Centre (KRDC)
B/47, Addl. MIDC. Anand Nagar, Ambernath (East), Thane- 421 506,
India

OBSERVATIONS:

The drying behavior of Vegetables like Ladyfinger, Spinach, Carrot, Onion, Bottle gourd, Tomato, Potato, Cauliflower & Garlic has been investigated under the convection heating system. The drying rate is found to be increasing with respect to increase in time. It has been found that the moisture content on the dry basis (%) decreases with respect to increase in drying time. As per physical investigation, texture of product is crunchy since it is dried as desired and colour of product is mostly retained.

A handwritten signature in blue ink that reads "Komal".

**Tested By,
Ms Komal Ingle**