

Kerone Research & Development Centre (KRDC), B/47, Addl. MIDC. Anand Nagar, Ambarnath (East), Thane- 421 506, India
Tel- +91-251-2620542/13/44/45/46 E-mail: info@kerone.com, www.kerone.com

Customer :	M/s. Miki Chicken, Navi Mumbai
Process :	Batch Dehydration Heat Treatment for Drying of Chicken

TEST REPORT No: 47/KRDC/LAB/17 Mum 15/12/2017

Date Sample reception : 15/12/2017
ID : 47/LAB/04

SAMPLE DESCRIPTION:

Sampling : As requested
Sample Condition : Acceptable
Quantity : 2 kg (-each)
Sampling date : 16/12/2017
Product : Chicken breast boneless, Chicken wind pipe, Chicken leg boneless and
Chicken liver
Requirement : Final product must be absolute dry with zero moisture content
Start Date test : 16/12/2017
End Date test : 24/12/2017

LABORATORY EXPERIMENTAL SET UP:



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LAB BATCH DEHYDRATION 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
Centrifugal Exhaust Blower	1440 rpm
No. of trays	6
Tray size (width*height*depth)	560*25*435 mm

Environment-laboratory Ambient Conditions:

Temperature (degree C)	23 degrees C (± 5 degrees C)
Humidity (%)	<80 % 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

SAMPLE PREPARATION AND METHOD/PROCEDURE:

For each experimental run, some amount of sample from every type of chicken was taken and placed it on perforated tray and observations are made after every 1 hour by checking the weight loss on drying. Also, initial weight before drying and final weight after drying was taken.

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ANALYTICAL RESULTS:

1. Chicken Boneless Breast

Initial sample weight: 500 grams

Sr. No.	Time (hours)	Temperature (°C)	Weight noted (grams)	Weight loss (grams)	Remarks, if any
1.	After 1	60	376	124	
2.	After 2	60	320	180	
3.	After 3	60	279	221	
4.	After 4	60	248	252	
5.	After 5	60	227	273	
6.	After 6	60	209	291	
7.	After 7	60	170	330	
8.	After 8	60	147	353	
9.	After 9	60	145	355	

Sample weight after drying: 145 grams

Total weight loss on drying: 355 grams

Observation: Change in appearance, colour, texture and approximately 71% weight loss on drying.

2. Chicken Wind Pipe

Initial sample weight: 300 grams

Sr. No.	Time (hours)	Temperature (°C)	Weight noted (grams)	Weight loss (grams)	Remarks, if any
1.	After 1	60	136	164	
2.	After 2	60	84	216	
3.	After 3	60	68	232	
4.	After 4	60	63	237	

Sample weight after drying: 63 grams

Total weight loss on drying: 237 grams

Observation: Change in appearance, colour, texture and approximately 79% weight loss on drying.

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3. Chicken leg boneless

Initial Sample Weight: 400 grams

Sr. No.	Time (hours)	Temperature (°C)	Weight noted (grams)	Weight loss (grams)	Remarks, if any
1.	After 1	60	308	92	
2.	After 2	60	265	135	
3.	After 3	60	236	164	
4.	After 4	60	212	188	
5.	After 5	60	194	206	
6.	After 6	60	180	220	
7.	After 7	60	143	257	
8.	After 8	60	133	267	
9.	After 9	60	129	271	
10.	After 10	60	125	275	

Sample weight after drying: 125grams

Total weight loss on drying: 275 grams

Observation: Change in appearance, colour, texture and approximately 68.75% weight loss on drying.

4. Chicken liver

Initial Sample Weight: 379 grams

Sr. No.	Time (hours)	Temperature (°C)	Weight noted (grams)	Weight loss (grams)	Remarks, if any
1.	After 1	60	281	98	
2.	After 2	60	228	151	
3.	After 3	60	180	199	
4.	After 4	60	140	239	
5.	After 5	60	130	249	
6.	After 6	60	124	255	

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7.	After 7	60	119	260	
8.	After 8	60	117	262	
9.	After 9	60	115	264	
10.	After 10	60	113	266	

Sample weight after drying: 113 grams

Total weight loss on drying: 266 grams

Observation: Change in appearance, colour, texture and approximately 70.19% weight loss on drying.

5. Chicken Lungs

Initial Sample Weight: 172 grams

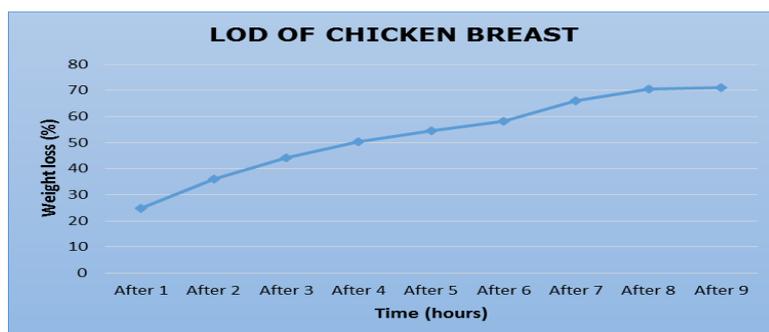
Sr. No.	Time (hours)	Temperature (°C)	Weight noted (grams)	Weight loss (grams)	Remarks, if any
1.	After 1	60	116	56	
2.	After 2	60	91	81	
3.	After 3	60	74	98	
4.	After 4	60	62	110	
5.	After 5	60	53	119	
6.	After 6	60	47	125	
7.	After 7	60	43	129	
8.	After 8	60	41	131	

Sample weight after drying: 41 grams

Total weight loss on drying: 131 grams

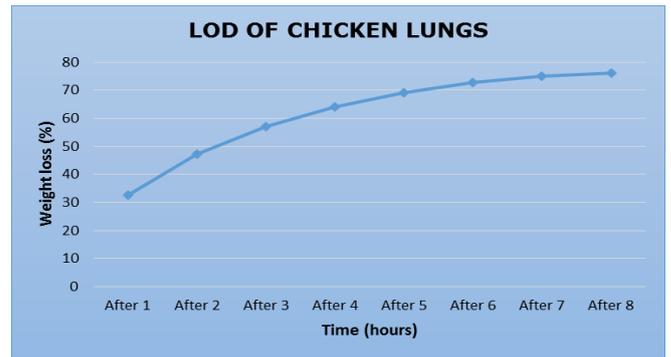
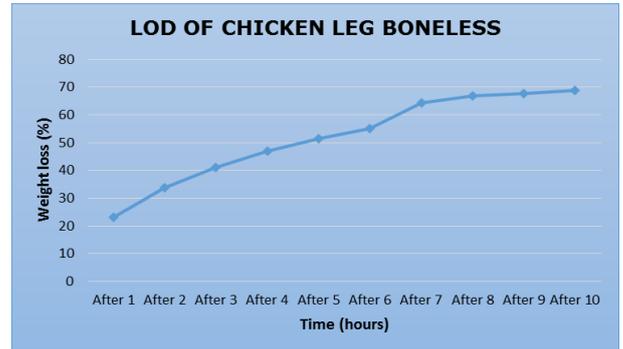
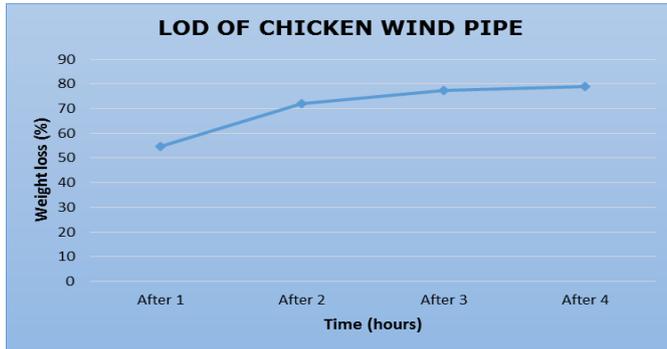
Observation: Change in appearance, colour, texture and approximately 76.16% weight loss on drying.

GRAPHICAL REPRESENTATION OF DRYING PARAMETERS:



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PICTURES OF TREATED SPECIMAN SAMPLE:

1. Chicken breast



2. Chicken wind pipe



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3. Chicken leg boneless



4. Chicken liver



5. Chicken lungs



Observations & Recommendations: By physical investigation, the post heat treatment analysis has to be done.



Miss. Komal Bhoite
Tested By



Dr. Uttam K. Goswami
Approved By

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