

Part I

FRESH PERCH LTD.
P. O. BOX - 671, ENTEBBE, UGANDA

DOC NO: FPL-CPQAR-05-FSMS

NILE PERCH FILLETS CHILLED PRODUCT TEMPERATURE MONITORING RECORD

Date of Sampling: 06th July 2020

Sample Details: 3.00 kg Chilled Nile Perch Fillets of grade 300-500 g contain 6 numbers of individual fillets in box.

Sampling Scope: To monitor the temperature of individual chilled fillet during time of packing and after five hour of storage in desired temperature.

Sampling Description:

SAMPLE NO.	TIME OF PACKING: 5.30 PM & TEMP. °C	TIME OF CHECKING: 10.30 PM & TEMP. °C
E1	-1.8	-1.3
E2	-1.5	-1.3
E3	-1.4	-1.3
E4	-1.6	-1.3
E5	-1.5	-1.3
E6	-1.2	-1.3
AVG. E TEMP. °C	-1.5	-1.3

Sampling Evidences:

**A) TEMPERATURE RECORDED DURING TIME OF PACKING: TIME OF PACKING:
5.30 PM AND TEMPERATURE (°C) OF EACH SAMPLE:**

Sample No. E1:



Sample No. E2:



Sample No. E3:



Sample No. E4:



Sample No. E5:



Sample No. E6:



B) TEMPERATURE RECORDED AFTER 5 HOUR'S OF PACKING: TIME OF CHECKING: 10.30 PM AND TEMPERATURE (°C) OF EACH SAMPLE:

Sample No. E1:



Sample No. E2:



Sample No. E3:



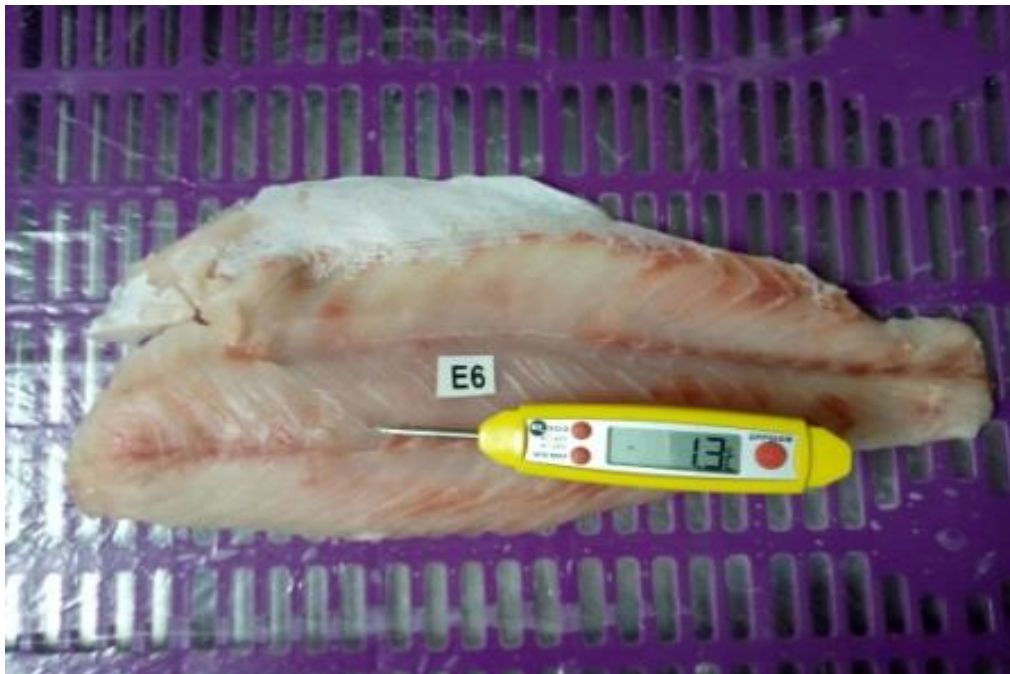
Sample No. E4:



Sample No. E5:



Sample No. E6:



Inspection Done by: Andrew Elimu - Quality Inspector

Verified by: Fred Baghabya - Quality Assurance Manager

Authorized by: Faheem Munshi - Production Manager

Part II

Nile perch product temperature

Superchilling report at Ugandan factory

1) Lake Eco Fiorital lot AQ20010915

LAKE ECO FISH PROCESSING LIMITED

Company	Lake Eco fish processing ltd.
Batch	189
Date	07/07/2020

NILE PERCH SKINLESS FILLETS

START: Before entering the super chilling room	STOP: After exiting the super chilling room
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Start core temperature	3.0°C	Finish core temperature	-1.3°C
Start time super chilling	07:30am	Finish time super chilling	08:10am
Temperature chilling room	-5°C	Temperature chilling room	-7°C

Start core temperature	3.3°C	Finish core temperature	-1.5°C
Start time super chilling	08:15am	Finish time super chilling	09:00am
Temperature chilling room	-7°C	Temperature chilling room	-8°C

Start core temperature	3.1°C	Finish core temperature	-1.6°C
Start time super chilling	09:05am	Finish time super chilling	09:45am
Temperature chilling room	-7°C	Temperature chilling room	-9°C

Start core temperature	3.3°C	Finish core temperature	-1.5°C
Start time super chilling	09:50am	Finish time super chilling	10:30am
Temperature chilling room	-6°C	Temperature chilling room	-8°C

Start core temperature	3.1°C	Finish core temperature	-1.8°C
Start time super chilling	10:40am	Finish time super chilling	11:25am
Temperature chilling room	-9°C	Temperature chilling room	-10°C

Start core temperature	3.1°C	Finish core temperature	-1.5°C
Start time super chilling	11:30am	Finish time super chilling	12:15pm
Temperature chilling room	-10°C	Temperature chilling room	-11°C

Start core temperature	3.3°C	Finish core temperature	-1.8°C
Start time super chilling	12:20pm	Finish time super chilling	1:03pm
Temperature chilling room	-9°C	Temperature chilling room	-11°C



Prepared by:  Quality supervisor

Approved by:  Quality Manager

2) Lake bounty Fiorital lot AQ20010914

LAKE BOUNTY LTD.

Company:	Lake Bounty Ltd
Lot:	B283LB
Date:	06.07.2020

START: Before entering the superchilling room		STOP: After exiting the superchilling room	
Start core temperature	3.5°C	Finish core temperature	-1.8°C
Start time superchilling	11:16am	Finish time superchilling	11:56am
Temperature chilling room	-16.5°C	Temperature chilling room	-16.7°C
Start core temperature	3.8°C	Finish core temperature	-1.6°C
Start time superchilling	11:29am	Finish time superchilling	12:12pm
Temperature chilling room	-15.3°C	Temperature chilling room	-15.6°C
Start core temperature	4.0°C	Finish core temperature	-1.5°C
Start time superchilling	11:38am	Finish time superchilling	12:24pm
Temperature chilling room	-14.7°C	Temperature chilling room	-14.9°C
Start core temperature	4.4°C	Finish core temperature	-1.7°C
Start time superchilling	11:42am	Finish time superchilling	12:31pm
Temperature chilling room	-14.6°C	Temperature chilling room	-14.8
Start core temperature	3.9°C	Finish core temperature	-1.4°C
Start time superchilling	11:59am	Finish time superchilling	12:44pm
Temperature chilling room	-14.9°C	Temperature chilling room	-15.5°C
Start core temperature	4.1°C	Finish core temperature	-1.9°C
Start time superchilling	12:05pm	Finish time superchilling	12:47pm
Temperature chilling room	-14.7°C	Temperature chilling room	-15.0°C
Start core temperature	3.7°C	Finish core temperature	-1.4°C
Start time superchilling	12:18pm	Finish time superchilling	01:02pm
Temperature chilling room	-14.8°C	Temperature chilling room	-15.1°C
Start core temperature	4.3°C	Finish core temperature	-1.5°C
Start time superchilling	12:23pm	Finish time superchilling	01:08pm
Temperature chilling room	-14.5°C	Temperature chilling room	-14.9°C
Start core temperature	3.4°C	Finish core temperature	-1.7°C
Start time superchilling	12:39pm	Finish time superchilling	01:22pm
Temperature chilling room	-15.5°C	Temperature chilling room	-15.9°C
Start core temperature	4.6°C	Finish core temperature	-1.6°C
Start time superchilling	12:47pm	Finish time superchilling	01:33pm
Temperature chilling room	-15.8°C	Temperature chilling room	-16.2°C

Prepared by: [Signature] Quality supervisor



Approved by: [Signature] Quality manager

3) Fresh perch Fiorital lot AQ20010913

Sample No. 1	Company;	Fresh Perch Limited, Jinja - Uganda
	Batch:	C-2820-011655
	Date:	07.07.2020

START: Before entering the Chilling room



Start core Temperature	+2.6 ° C
Start time chilling	07.25 am
Temperature chilling room	-25 ° C

STOP: After exiting the Chilling room



Finish core Temperature	-2.1 ° C
Finish time chilling	08.12 am
Temperature chilling room	-25 ° C

Sample No.

2

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.8 ° C
Start time chilling	07.30 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-2.1 ° C
Finish time chilling	08.17 am
Temperature chilling room	-25 ° C

Sample No.

3

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.4 ° C
Start time chilling	07.42 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-2.1 ° C
Finish time chilling	08.30 am
Temperature chilling room	-25 ° C

Sample No.

4

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.9 ° C
Start time chilling	07.50 am
Temperature chilling room	-25° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-1.8 ° C
Finish time chilling	08.36 am
Temperature chilling room	-25 ° C

Sample No.

5

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.4 ° C
Start time chilling	08.00 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-2.1 ° C
Finish time chilling	08.48 am
Temperature chilling room	-25 ° C

Sample No.

6

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.9 ° C
Start time chilling	08.14 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-1.9 ° C
Finish time chilling	09.00 am
Temperature chilling room	-25 ° C

Sample No.

7

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.4 ° C
Start time chilling	08.20 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-2.0 ° C
Finish time chilling	09.07 am
Temperature chilling room	-25 ° C

Sample No.

8

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.2 ° C
Start time chilling	08.26 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-2.0 ° C
Finish time chilling	09.13 am
Temperature chilling room	-25 ° C

Sample No.

9

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

START: Before entering the Chilling room



Start core Temperature	+2.6 ° C
Start time chilling	08.30 am
Temperature chilling room	-25 ° C

STOP: After exiting the Chilling room



Finish core Temperature	-2.0 ° C
Finish time chilling	09.18 am
Temperature chilling room	-25 ° C

Sample No.

10

Company;	Fresh Perch Limited, Jinja - Uganda
Batch:	C-2820-011655
Date:	07.07.2020

**START: Before entering
the Chilling room**



Start core Temperature	+2.2 ° C
Start time chilling	08.43 am
Temperature chilling room	-25 ° C

**STOP: After exiting the
Chilling room**



Finish core Temperature	-1.9 ° C
Finish time chilling	09.30 am
Temperature chilling room	-25 ° C

Temperature checks at Entebbe airport (Uganda) before departure to Liege airport (Belgium)

1) Lake eco Fiorital lot AQ20010915



National Aviation Se

Cargo department

Fish acceptance and temp. Data control sheet

NAME OF SHIPPER: L. Eco DATE: 07-07-2020
 FLIGHT NO.: ET, AFD APT OF DEST.: JED


VEHICLE REG NO.	ARRIVAL TIME	ULD LOADED	NO OF PIECES	QTY RECEIVED FOR EXPORT	NO OF BOXES SAMPLED	TEMPERATURE RANGE RECORDED AT DELIVERY	BATCH NO/ EXPIRY DATE	CONSIGNEE	REMARKS
	1217H	AVE5623G	251	1066	10	-1.0 - -1.4	21/07/20	Youssef ABU	/
	1253H	RC01104H	300	1851	10	-1.2 - -1.7	22/07/20	Fiorital	temp OK

I DECLARE THAT THE INFORMATION ABOVE IS CORRECT AND TRUE TO THE BEST OF MY KNOWLEDGE

SHIPPER'S NAME: L. Eco LTD QUALITY CONTROLLER: OTARA JATA
 SIGNATURE: [Signature] SIGNATURE: [Signature]
 DATE: 07-07-2020 DATE: 07-07-2020

Ref. No.: NCGO-04	Page: 1 of 1	Issue No.: Date: 12.03.2018	Rev. No.: Date:	Effective Date: Date: 12.03.2018
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2) Lake Bounty Fiorital lot AQ20010914



National Aviation Se

Cargo department

Fish acceptance and temp. Data control sheet

NAME OF SHIPPER: L. Bounty DATE: 07-07-2020
 FLIGHT NO.: ADJ APT OF DEST.: LAG

VEHICLE REG NO.	ARRIVAL TIME	ULD LOADED	NO OF PIECES	QTY RECEIVED FOR EXPORT	NO OF BOXES SAMPLED	TEMPERATURE RANGE RECORDED AT DELIVERY	BATCH NO/ EXPIRY DATE	CONSIGNEE	REMARKS
UAC	1003H	PMC01142H	802	2703	10	-1.0 - -1.6	21-7-20	Fiorital	temp
021Z		PMC01104H	101	1384	10	-1.3 - -2.0	21-7-20	Fiorital	OK

I DECLARE THAT THE INFORMATION ABOVE IS CORRECT AND TRUE TO THE BEST OF MY KNOWLEDGE

SHIPPER'S NAME: Lake Bounty Ltd QUALITY CONTROLLER: OTARA JATA
 SIGNATURE: [Signature] SIGNATURE: [Signature]
 DATE: 07-07-2020 DATE: 07-07-2020

Ref. No.: NCGO-04	Page: 1 of 1	Issue No.: Date: 12.03.2018	Rev. No.: Date:	Effective Date: Date: 12.03.2018
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3) Fresh perch Fiorital lot AQ20010913

	National Aviation Se
	Cargo department
	Fish acceptance and temp. Data control sheet

NAME OF SHIPPER Mercy Perch DATE 07-07-2020
 FLIGHT NO. ABD APT OF DEST. LGG

VEHICLE REG NO.	ARRIVAL TIME	ULD LOADED	NO OF PIECES	QTY RECEIVED FOR EXPORT	NO OF BOXES SAMPLED	TEMPERATURE RANGE RECORDED AT DELIVERY	BATCH NO/ EXPIRY DATE	CONSIGNEE	REMARKS
UAS 629Z	10:08h	pic 0104H	863	3519	10	-1.3 - -1.8	21-07-20	Fiorital	temp. OK

I DECLARE THAT THE INFORMATION ABOVE IS CORRECT AND TRUE TO THE BEST OF MY KNOWLEDGE

SHIPPER'S NAME ADY FRANCO QUALITY CONTROLLER DETALA JPH
 SIGNATURE [Signature] SIGNATURE [Signature]
 DATE 07/07/2020 DATE 07-07-2020

Ref. No.: NCGO-04	Page: 1 of 1	Issue No.: Date: 12.03.2018	Rev. No.: Date:	Effective Date: Date: 12.03.2018
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Temperature checks at Fiorital (Italy)

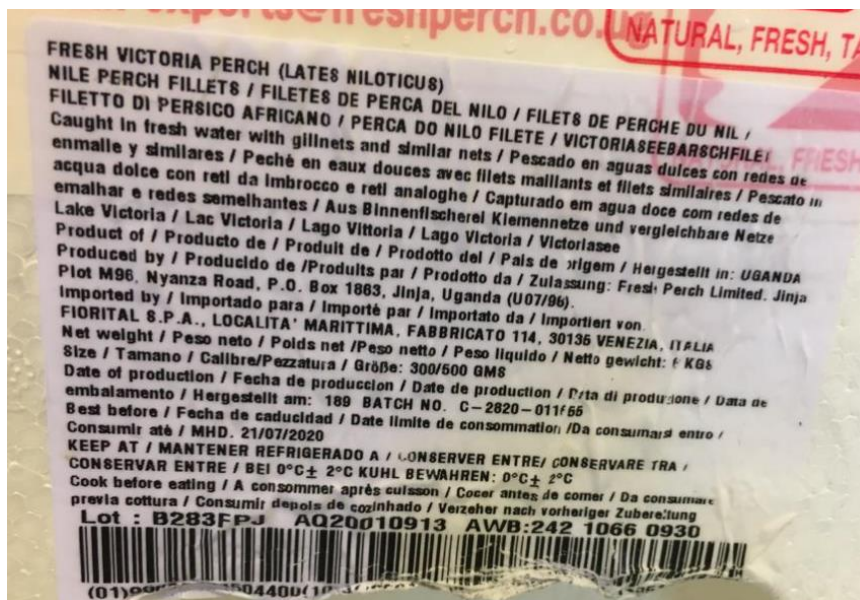
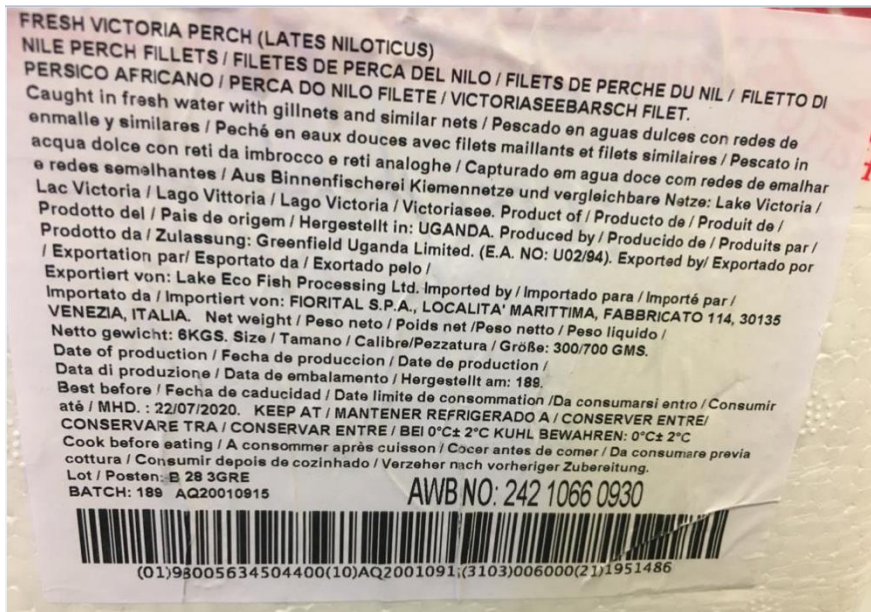
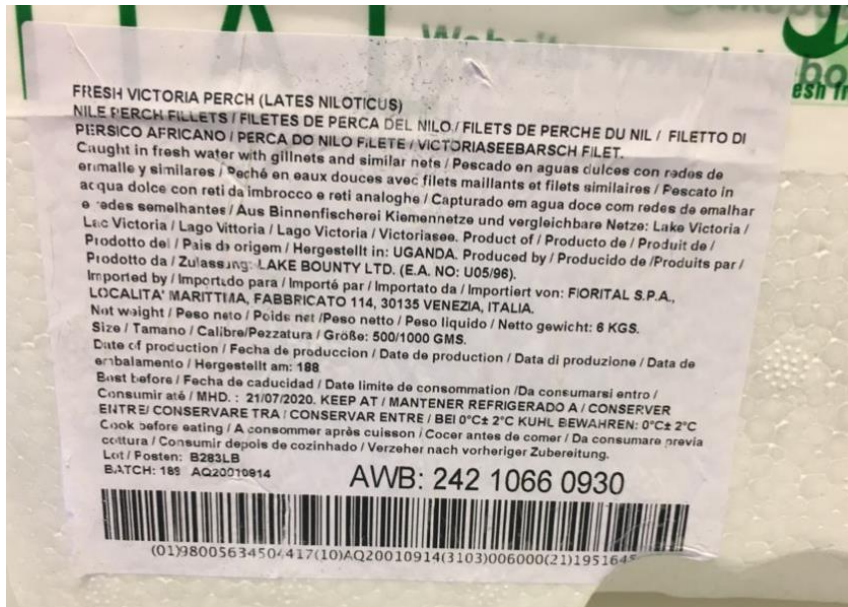
DATA: 10/07/2020

PRELEVATORE: CLAUDIA CATANZARO

STORAGE AGENT LOT	CO LO RE	TAGL IA	REF. NUMBER	BATCH	N. INTERNO	DATA SPED.	DATA SCAD.	AQ	T°C	COMM.
B2836E		300 700	242-1066 0930	189	NAP16 55920	189	22/07	20010915	-15	6078
B2839S		300 500	242-1066- 0930	C-2820- 01655	/	189	21/07	20010913	-10	6076
B2831B		500 1000	242-1066- 0930	189	/	188	21/07	20010914	-1,1	6077

Fiorital S.p.A.
 con **Socid Unico**
 Loc. Marittima Fabbriato 114
 30135 Venezia

Label of the product



Truck temperature from Liege airport to Fiorital

ALBERTON

ID VEICOLO
MODELLO DL
DL_SERIAL N:
15/07/2020

M0881FT
TOUCHPRINT
0716020659
°C

11: DAVANTI 12: DIETRO

08/07/2020	11	12	13	14	15	16
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00:26	16.1	16.2				
00:41	16.1	16.2				
00:56	16.1	16.2				
01:11	16.1	16.2				
01:26	16.1	16.2				
01:41	16.1	16.2				
01:56	16.1	16.3				
02:11	16.2	16.3				
02:26	16.2	16.4				
02:41	16.3	16.4				
02:56	16.3	16.5				
03:11	16.4	16.5				
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03:56	16.2	16.4				
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19:56	1.9	2.0				
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20:26	1.8	1.9				
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21:11	1.2	1.3				
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21:41	1.4	1.4				
21:56	1.7	1.5				
22:11	1.9	2.0				
22:26	1.0	1.0				
22:41	-0.2	-0.2				
22:56	1.6	1.3				
23:11	2.1	2.1				
23:26	1.9	2.0				
23:41	1.7	1.4				
23:56	2.0	2.0				

08.07.20

ALBERTON

ID VEICOLO
MODELLO DL
DL_SERIAL N:
15/07/2020

M0881FT
TOUCHPRINT
0716020659
°C

11: DAVANTI 12: DIETRO

09/07/2020	11	12	13	14	15	16
00:11	-0.5	-0.6				
00:26	-0.1	0.0				
00:41	1.8	1.6				
00:56	1.5	1.5				
01:11	-1.1	-1.1				
01:26	2.2	2.1				
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01:56	2.9	2.8				
02:11	1.7	1.7				
02:26	1.4	1.3				
02:41	0.4	0.5				
02:56	1.8	1.9				
03:11	1.1	1.1				
03:26	1.6	1.7				
03:41	0.2	0.3				
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04:41	1.7	1.7				
04:56	-0.5	-0.5				
05:11	0.6	0.6				
05:26	1.7	1.7				
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06:41	1.8	1.8				
06:56	1.3	1.3				
07:11	0.4	0.3				
07:26	2.1	1.8				
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08:11	2.0	1.9				
08:26	2.5	2.5				
08:41	1.2	1.3				
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22:56	24.1	24.2				
23:11	23.8	24.0				
23:26	23.5	23.6				
23:41	23.3	23.5				
23:56	22.7	22.9				

09.07.20

Part III

Dataloggers

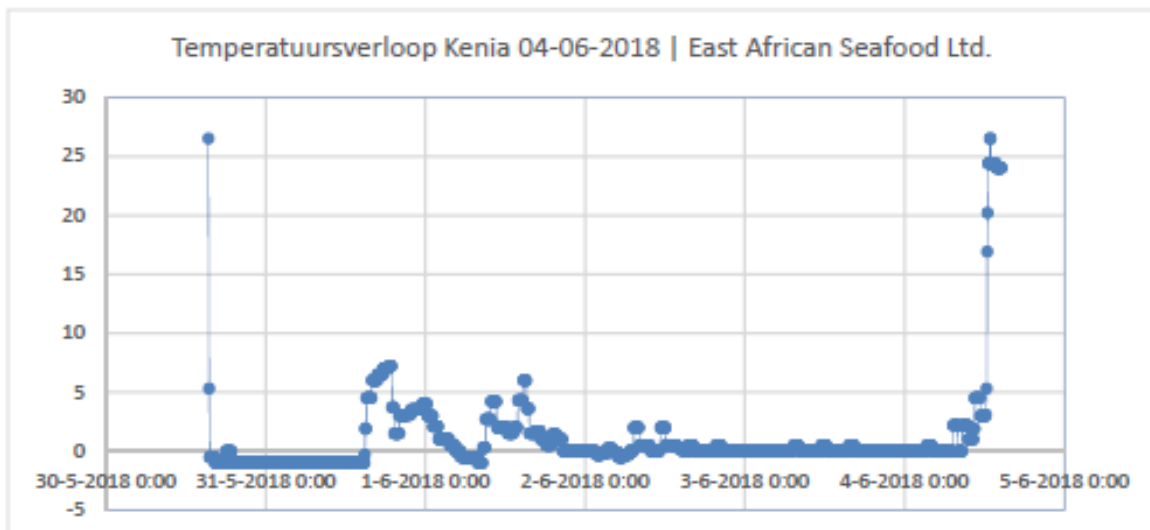
East African Sea Food Ltd.- Kenya



Logger above product (no probe)



Seven sample fillets in 6kg box (instead 3 kg box)



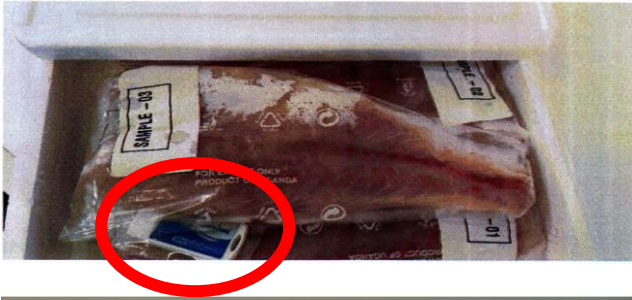
Measured temperature logger

Core temperature product at destination +0.5 degrees (mentioned in report reason for this). See explanation above in pictures.

The use of a too big box could explain the showed pattern of the logger.

Dutch Fish Importers Association the Netherlands, 16-07-2020

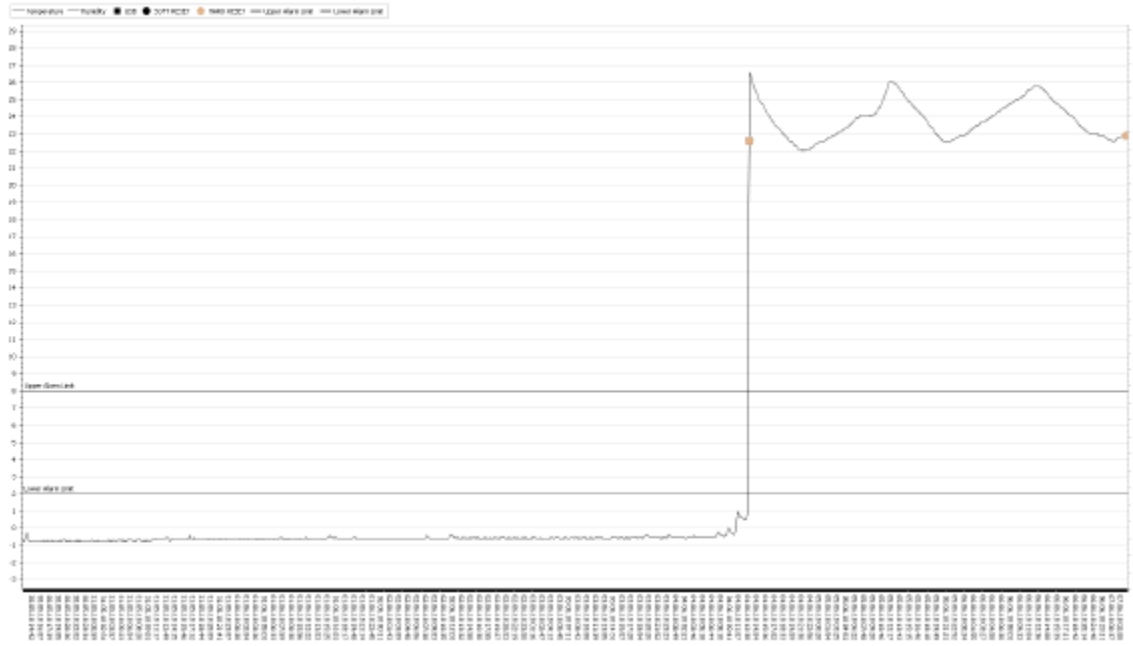
Karmic Food Ltd. – Uganda



Logger between product



Seven samples in 3 kg box



Measured temperature logger

Core temperature product at destination -0.5 degrees



Comparison box Karmic Food Ltd. 3 kg (left) and East African Seafood Ltd. 6kg box (right)

Differences:

- East African Seafood Ltd. 6kg box (right):
 - o Bigger box (6 kg)
 - o Logger on top of products
 - o Core temperature product +0.5 degrees (mentioned in report reason for this)

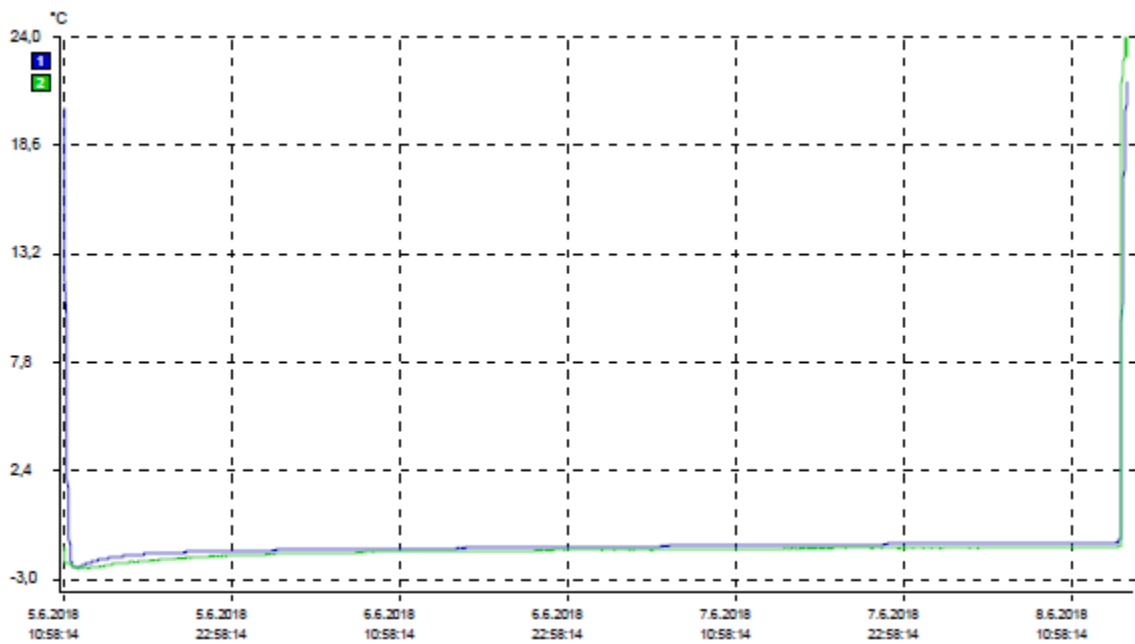
Supreme perch:



Seven samples in 3 kg box



Transport logger in core fillet



Measured temperature logger

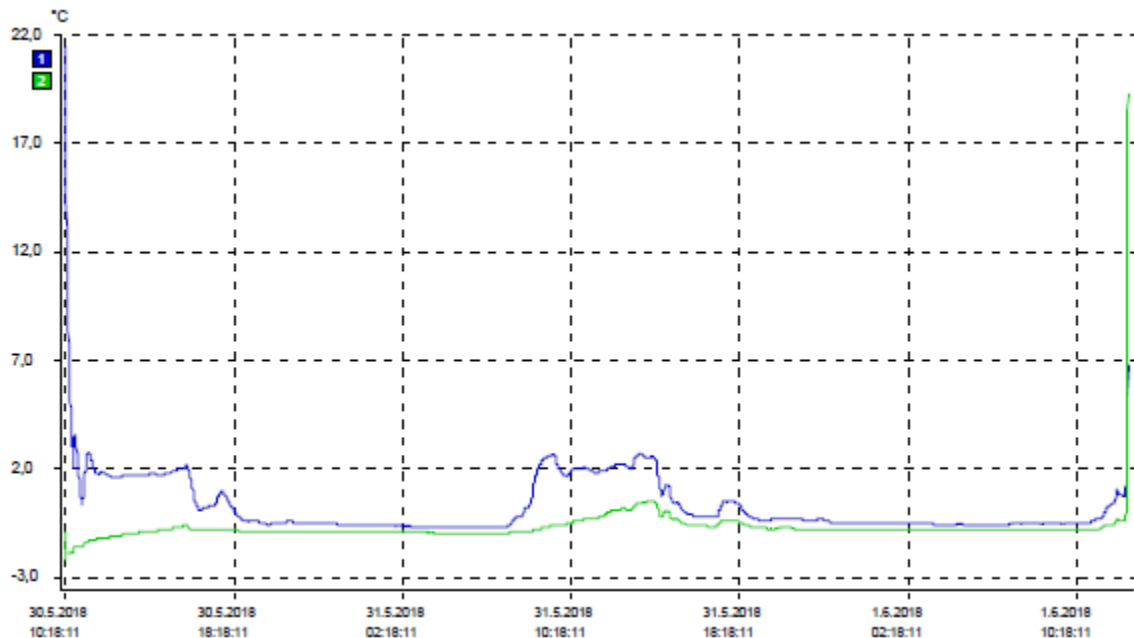
(blue line is logger temperature – green line is probe temperature)

Core temperature at destination -1.6 degrees

Fresh Perch Ltd. (Uganda)



Seven samples in 6 kg box (instead 3 kg box)



Measured temperature logger

(blue line is logger temperature – green line is probe temperature)

Core temperature at destination -0.8 degrees

Comment received from RIKILT Wageningen UR: The probe attached to the logger was loose in the box (1-6-2018). I can forward the communication if needed.

Both, the use of a too big box and the comment from RIKILT Wageningen UR could explain the showed pattern of the logger.

Part IV

Temperatures coldstore and transport

To validate the influence of the ambient temperature (set and real temperatures of the transport and storage, including loading and unloading) on the temperature of the Superchilled products, dataloggers were placed inside a Nile perch box (figure 1) and outside a Nile perch box (figure 2) during a recent regular consignment (see picture 1 below). The homgenised temperature of the transported superchilled Nile perch fillets in this consignment was $-1.4\text{ }^{\circ}\text{C}$ at departure factory.

Device Information

Serial Number: S118050094-18	Log Interval: 00H 10M 00S	Temperature Type: $^{\circ}\text{C}$
Model Number: S1C10A01000	Start Mode: Start by Button	
Version: V2.1	Start Delay: 00D 00H 00M 00S	

Trip Information

Internal ID: 0000001
Description: Temperature recording.

Logging Summary

Highest Temperature: $23.1\text{ }^{\circ}\text{C}$	Record Mode: Stop when full	Start Time: 10-Jul-20 11:14:19
Lowest Temperature: $-1.3\text{ }^{\circ}\text{C}$	Stop Mode: Stop by Button	Stop Time: 15-Jul-20 14:04:19
Average Temperature: $-0.5\text{ }^{\circ}\text{C}$	Data Points: 738	Elapsed Time: 05D 02H 50M 00S
MKT: $-0.4\text{ }^{\circ}\text{C}$	Alarm At: N/A	

Marked Events

NA

Temperature[$^{\circ}\text{C}$]

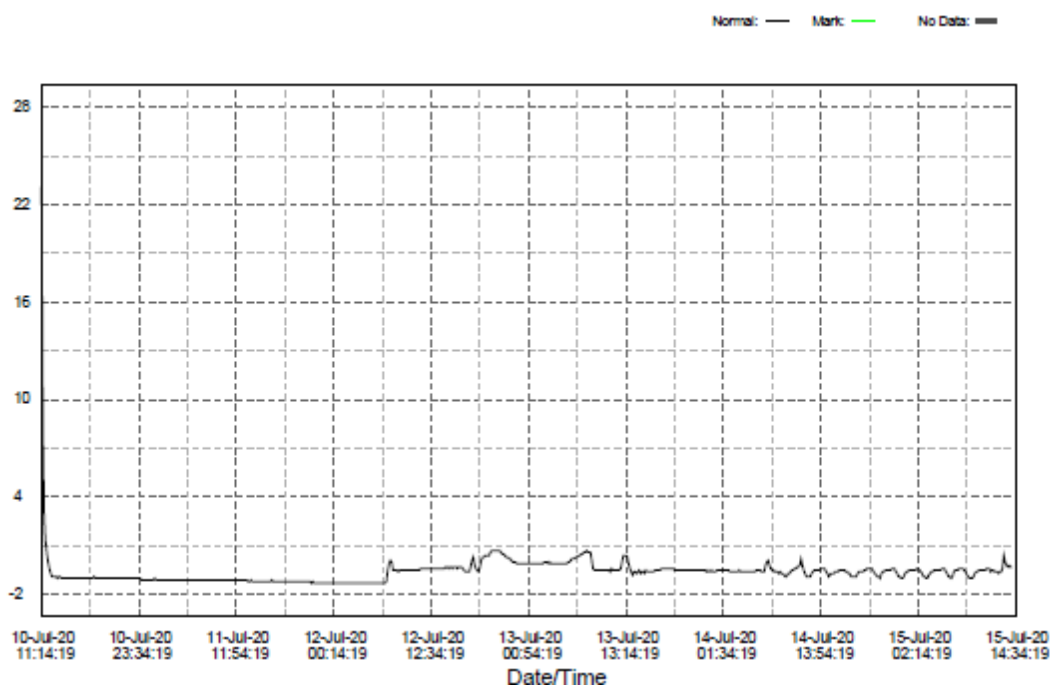


Figure 1: datalogger temperature inside box Nile perch value Chain (10-15 July 2020). Full data about the inside box temperature is available via this [link](#).

Device Information

Serial Number: S118050094-17	Log Interval: 00H 10M 00S	Temperature Type: °C
Model Number: S1C10A01000	Start Mode: Start by Button	
Version: V2.1	Start Delay: 00D 00H 00M 00S	

Trip Information

Internal ID: 0000001
Description: Temperature recording.

Logging Summary

Highest Temperature: 23.1 °C	Record Mode: Stop when full	Start Time: 10-Jul-20 10:56:06
Lowest Temperature: -5.8 °C	Stop Mode: Stop by Button	Stop Time: 15-Jul-20 13:36:06
Average Temperature: 1.4 °C	Data Points: 737	Elapsed Time: 05D 02H 40M 00S
MKT: 4.7 °C	Alarm At: N/A	

Marked Events

N/A

Temperature[°C]

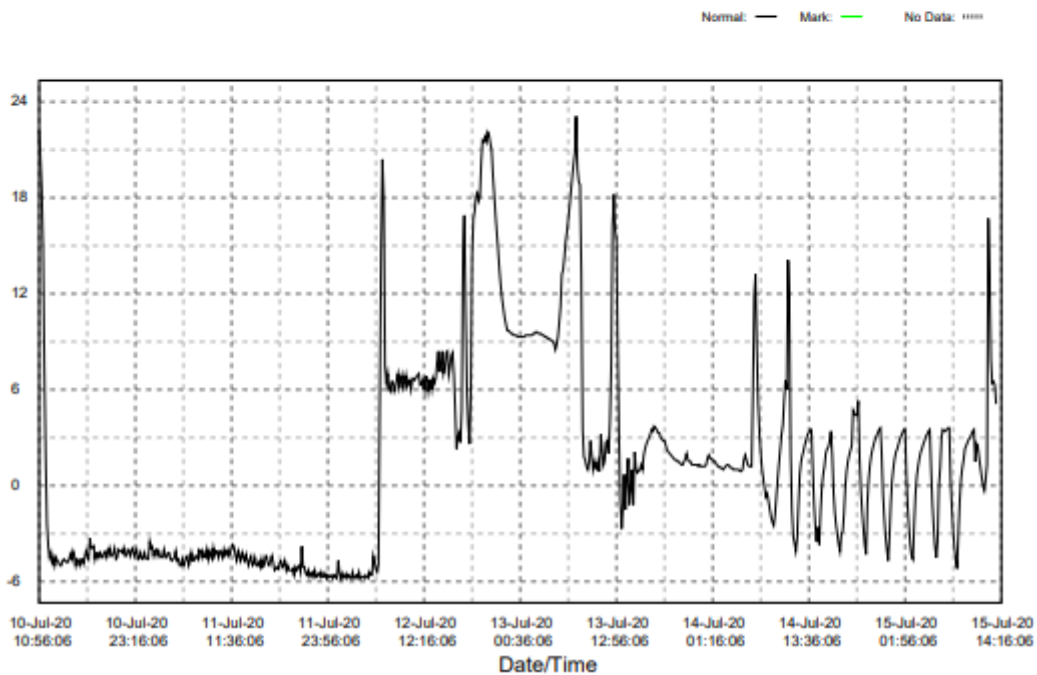
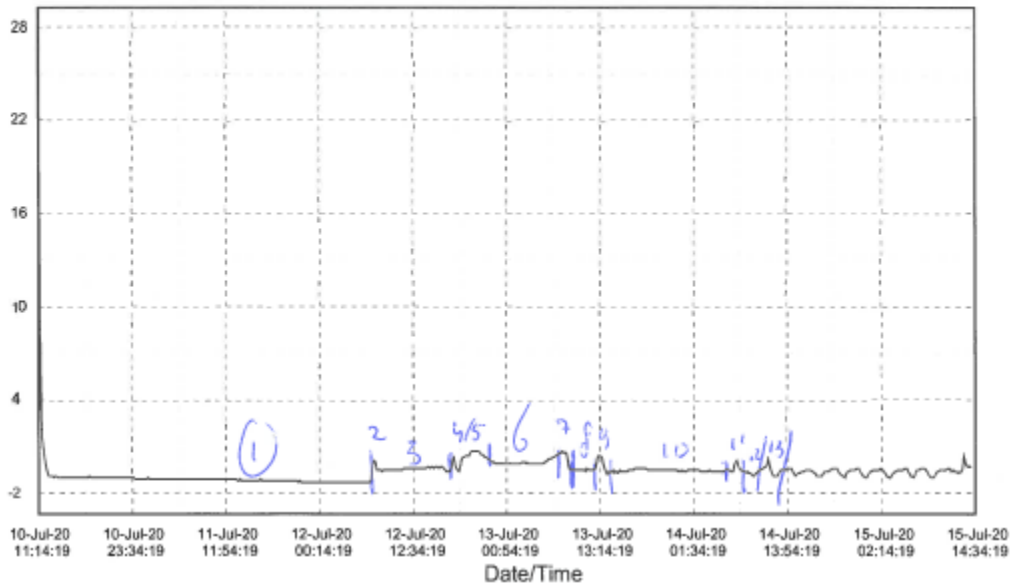


Figure 2: datalogger ambient temperature (outside the box) Nile perch value Chain (10-15 July 2020). Full data about the ambient temperature is available via this [link](#).

In figure 3 the different steps in the Nile perch value chain are pointed. Below this figure we describe the different steps in this value chain.

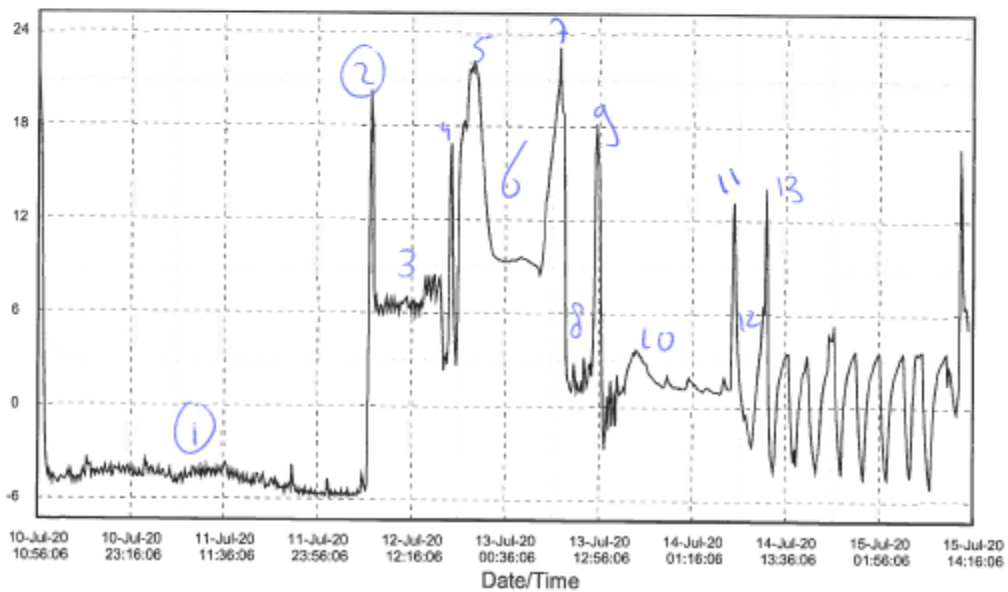
Temperature[°C]

Normal: — Mark: — No Data: ----



Temperature[°C]

Normal: — Mark: — No Data: ----



www.tempmate.com

1/3

Figure 3: Steps in the Fresh superchilled Nile Perch value chain transport and storage from leaving the factory at origin.

Steps in the Fresh superchilled Nile Perch value chain

1. 10/7/2020 (11:30) – 12/7/2020 (06:30): Road transport from the factory to the airport. The trucks temperature varies between -3.8 and -5.8 °C Celsius. During that period the inside temperature is stable around -1 degree Celsius.

2. 12/7/2020 (06:30) - 12/7/2020 (07:15): Unloading at the airport. During a period of roughly 45 minutes the ambient temperature increases to maximum 20.4 °C Celsius
During that same period the inside temperature also increases, to maximum 0.0 °C
3. 12/7/2020 (07:15) - 12/7/2020 (17:15) Storage in the coldstore at the airport, during this period the ambient temperature is app 6/7 °C. Inside temperature is around -0.4 °C
4. 12/7/2020 (17:15) - 12/7/2020 (17:45): Transport from coldstore to the plane, ambient temperature rises to maximum 16.9 °C, inside temperature rises to 0.3 °C
5. 12/7/2020 (18:15) - 12/7/2020 (22:30): Reopening of the plane, most likely for loading additional other goods, ambient temperature rises to maximum 22 °C, inside temperature rises to 0.7 °C
6. 12/7/2020 (22:30) – 13/7/2020 (06:00): Air transport, ambient temperature is around 9 °C, with an inside temperature around 0 °C
7. 13/7/2020 (06:00) - 13/7/2020 (08:30): Plane unloading at Amsterdam airport, ambient temperature rises to 23.1, with an inside temperature of 0.7 °C
8. 13/7/2020 (08:30) - 13/7/2020 (12:15): Storage in the coldstore of Malenstein, ambient temperature around 2 °C, inside temperature 0.5 °C
9. 13/7/2020 (12:15) - 13/7/2020 (13:00): Loading with forwarding agents from Amsterdam airport, ambient temperature rises to maximum 18.2 °C, inside temperature rises to 0.4°C
10. 13/7/2020 (13:00) – 14/7/2020 (06:30): Road transport in the Netherlands, ambient temperature is between 0 and 4 °C, inside temperature -0.5 °C
11. 14/7/2020 (06:30) - 14/7/2020 (07:00): Unloading at Claresse visverwerking, ambient temperature rises to maximum 13.2 °C, inside temperature rises to 0 °C
12. 14/7/2020 (07:00) - 14/7/2020 (10:45):: Storage in the coldstore of claresse visverwerking, ambient temperature is between -2 and 4 °C, inside temperature -0.5 to -1 °C
13. 14/7/2020 (10:45) - 14/7/2020 (11:00): Pick up by Anova employee, ambient temperature rises to 14.1 °C

Conclusion:

Figure 1 shows a constant temperature inside the box in the supply chain between the factory at origin and arrival at customer (EU). The ambient temperature (fluctuation at loading and unloading; figure 2) has no significant influence on this temperature in the box.

Appendix 1: position loggers box in regular supply chain



Position logger outside box (ambient temperature)



Appendix 2: Pictures at Claesse Visverwerking (Destination EU)



Box with inside logger



Temperature measurement product at different positions in the box