

## RECOMMENDATIONS

### Cleaning

#### Hand cleaning:

- Pre rinsing with warm water
- Cleaning with combined cleaning detergent and brush. Accurate dosage of cleaning detergent. Water temperature over 50°C.
- Post rinsing with drinking water (good quality) – hot water
- Every second day or twice a week acid/alkaline cleaning.

#### Automatic cleaning

- Pre rinsing with warm water
- Cleaning duration 8 to 10 minutes with combined cleaning detergent.

- Accurate dosage of cleaning detergent (see product specification)
- Checking of water quantity
- Post rinsing with hot water over 85°C

Water has to be in a good drinking quality

#### Analysis and Sample taking at processing plant

- One sample of each tank before bottle filling
- One sample of the bottle at the beginning and at the end of the filling process.
- Bring one sample cooled down to the laboratory and keep the other bottles in your cooling room until you have the results.
- Check the results, run a chart with the results to see, if you must improve the situation.



Author  
**Regula Bickel (Switzerland)**  
Dairy Advisor (Processing)  
FiBL  
[regula.bickel@fibl.org](mailto:regula.bickel@fibl.org)  
+41 62 865 04 22



Contact person  
**Ruslan Bilyk**  
Facilitator Dairy  
FiBL  
[ruslan.bilyk@fibl.org](mailto:ruslan.bilyk@fibl.org)  
+38 044 278 17 97

All of the statements contained in this leaflet have been compiled by the authors according to their best knowledge and have been scrupulously checked by the Research Institute of Organic Agriculture FiBL. However, the possibility of mistakes cannot be ruled out entirely. Therefore, the publisher and the authors are not subject to any obligation and make no guarantees whatsoever regarding any of the statements etc. in this work; neither do they accept responsibility or liability for any possible mistakes contained therein. The "Organic Market Development in Ukraine 2012 – 2016" is carried out with financial support from the Swiss State Secretariat for Economic Affairs (SECO). The views expressed are those of the authors and do not necessarily reflect the views of the SECO.

Published:



© FiBL Project office in Ukraine, Kyiv, 2014

**Publisher:** Project "Organic Market Development in Ukraine" (2012-2016), FiBL Project office in Ukraine, 15, Khreshchatyk street, Kyiv city, 01001, Ukraine

**Author:** Regula Bickel

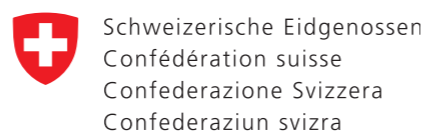
**English language editing:** Stefan Shürmann

**Pictures:** FiBL Cz

**Layout & printing:** RPP Printing Company

**Price:** This leaflet is free of charge and may be downloaded via the project homepage [www.ukraine.fibl.org](http://www.ukraine.fibl.org) or via the FiBL shop at <http://www.fibl.org/shop>

Financial support:



Swiss Confederation

DAIRY

Swiss-Ukrainian Project "Organic Market Development in Ukraine"  
Швейцарсько-український проект «Розвиток органічного ринку в Україні»



## DAIRY PROCESSING: HYGIENE PARAMETERS

### BASIC RULES

#### Only healthy cows give healthy milk:

- healthy udder: California Mastitis Test (Schalmtest) negative or measuring electrical conductivity (EC) of the milk is used as a test of udder health for detection of subclinical mastitis



#### Only clean equipment leads to acceptable Total Bacteria counts (TBC)

- Clean Rooms: Milking and processing area
- Clean equipment: Milking cluster, tanks, tubes, filling equipment, etc.
- Staff: clean clothes, washed hands and clean sanitary equipment



#### Milk temperature

- Quick cooling down to 6°C,
- holding it below 6°C



### SUMMARY

Most important thing in dairy production is to have a high hygiene level: the total bacterial count should be below 100'000 and the somatic cell count below 400'000. To reach this level, find the critical contamination points, improve the situation and monitor with a checklist!

Technical leaflet

## HYGIENE CONCEPT: CRITICAL CONTROL POINTS (CCP)

If you like to have the hygienic situation of your products under control you should first find the points, where contamination with bacteria could occur. The most popular concept for hygiene control is the CCP-Concept. Starting with milking, inspect all steps in the processing plant to find the critical contamination points.

### Step 1: Find the critical contamination points.

Find all the points, where bacteria could come in contact with the milk. Ask the following questions at each step of processing starting with the milking area:

- The Main questions: Exists a possibility, that bacteria could contaminate milk?  
Is everything cleaned before using?

- Is milk being exposed to unclean equipment?  
E.g. dirty towels, dirty baskets, tubes
- How often is the equipment cleaned?  
Is it enough?
- Is there any patched equipment? Is it possible that bacteria could contaminate at the patched situation?
- Does staff wear clean clothes and shoes?  
Do they wash and disinfect hands before working?
- Are there any windows, doors and ventilators where flies and other insects could enter the room?
- Etc.



### Step 2: create a checklist with the critical points

Write down all the risky points in a checklist, which you could use for monitoring the process. The checklist covers all the steps from milking to the finished product:

- Milking: e.g. cow, buckets, tubes, tanks, filters
- Storage: e.g. tank, connecting parts,
- Filling equipment: e.g. difficult to clean connecting parts, open tanks/baskets,
- Bottles, glasses used: e.g. packaging of empty bottles, damaged bottles
- Transport: e.g. temperature, tank
- Staff: e.g. clothes, hands, covered hair,
- Rooms/area: e.g. flies, windows, doors, walls, difficult to clean corners



### Step 3: Monitoring

Check the equipment, the rooms, the staff in the beginning every day using the checklist. When your quality reach acceptable TBC and SCC, you can do your checks every 2nd day.



	Raw milk consumption	Milk for processing
Total Bacteria count, TBC/ml	50'000	100'000
Somatic Cell Count, SCC/ml	300'000	400'000
Enterobacteria, counts/ml	100	na
Coagulase positive staphylococcus counts/ml	100	na
Salmonella counts/25ml	0	na