



# ***Improvement of the quality of milk and other dairy products and compliance with legal standards***

**(PRJ-0144-2017)**

***Dairy Standard Agency***

***Year 2017*** (January 2017 till December 2017)

## **Project goals**

### **Goal 1 - National monitoring of milk and other dairy products in collaboration with Health Authorities**

#### ***Achievements***

The quarterly sample runs for 2017 were successfully completed as per predetermined schedules. Based on four cycles and average 6 Metropolitan Municipalities, 12 District Municipalities and 56 Local Municipalities participated in the sampling runs representing all provinces. As per procedure results of all milk and other dairy products were benchmarked against food safety, compositional and trade metrology standards as per regulation. In the cutback environment that government operates in, the expertise needed to regulate was often lacking or too expensive to obtain. DSA in terms of its project protocol and relationships with the relevant authorities continuously worked with the law enforcement bodies and provided support through dairy technical information, workshops and guideline documents to limit the sale of non-conforming product.

The total number of samples of milk and other dairy products analysed are as per table 1 below.  
Table 1

<b>Dairy Product</b>	<b>Total</b>
Fresh milk in the categories named packed pasteurised and unpasteurised, pasteurised and unpasteurised retail bulk milk	1389
Flavoured milk	79
Yoghurt including plain, flavoured and yoghurt with added fruit and/or foodstuffs and drinking yoghurt	169
Cultured milk, cultured buttermilk	144
Butter	47
Cream	85
Cheese (various classes)	220
UHT, ultra-high pasteurised and sterilised milk	86
Condensed milk	46
Powdered milk	23
Dairy desserts and custard	36
<b>Total</b>	<b>2324</b>

Samples were submitted to SANAS accredited laboratories as per standard procedure and results of milk and other dairy products were benchmarked against food safety, compositional and trade metrology standards as respectively gazetted under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), Agricultural Product Standards Act, 1990 (Act 119 of 1990) and the Trade Metrology Act, 1973, (Act 77 of 1973). Non-conforming results obtained were assessed and communicated to the processors for further action. Contact details of participating authorities as well as processors were updated as per standard procedure. Non-conformance reports regarding added water, inhibitory substance positive, phosphatase positive and E.coli positive were also forwarded to the relevant authorities for further action.

It is important to note that the results are a reflection of the sample populations of the four different categories of milk sampled in terms of the DSA national dairy monitoring program whereby the majority milk samples are deliberately taken on a risk based approach as to identify possible non-conformities. Results should therefore not be interpreted as being representative of the national status of fresh milk in South Africa.

It is generally accepted that more than 90% of packed fresh milk offered for sale in the retail, finds its origin from the estimated top 20 to 25 dairy processors on a national level. The remainder 10% of packed fresh milk access the market place through small and medium size enterprises competing geographically on a national basis. By distinguishing between the sample results reflecting on the general status of all packed pasteurised milk and the results from the top 25 processors, an indication is obtained regarding the compliance rate of the top 25 processors within the sample populations.

As was the case in 2016 the categories packed unpasteurised, retail bulk pasteurised and unpasteurised milk (see figure 1) that continuously indicate a negative compliance rate remains a major concern and focus point of the DSA during 2017 in terms of critical food safety standards. Although the figures relating to this substandard products may seem insignificant in relation to the total of fresh milk sold in South Africa, it remains a persistent problem mainly due to poor control measures (law enforcement) and the unlawful sale of substandard milk to the end user.

DSA in terms of its project activities extensively used its guideline developments to promote the improvement of the level of compliance of the above categories of products during 2017.

DSA in terms of its project protocol and relationships with the relevant authorities (see project goals 5 and 6) continuously liaised with the relevant law enforcement bodies, providing support through dairy technical information, workshops and guideline documents to limit the sale of non-conforming products.

***No Non-achievements / underperformance has been reported***

## **Goal 2 - Investigations regarding complaints received in respect of product compliance with legal standards**

### ***Achievements***

Investigations regarding complaints related to:

Extended shelf life of cultured milk products

Underweight milk sachets sold in WC;

% butterfat of milk lower than stipulated as per Table 1, R260 class designation;

% butterfat of drinking yoghurt lower than stipulated as per Table 6, R260 class designation;

Nutritional table not compliant with R146 – Yoghurt;

Defective packaging – UHT milk;

Underweight milk sachets sold in Western Cape;

Sale of milk containing inhibitory substances;

Sale of milk containing added water;

Shelf life deviations of cultured milk;

Addition of starch to cultured milk;

Product claim - incorrect grade claim on cheese;

Mislabeling of cheese packed by retailer;

Fraudulent sale of mozzarella cheese made wholly from cow's milk and offered for sale as buffalo mozzarella;

Misleading claim on butter: "rbST hormone free" on label of butter;

Adulteration of fresh milk by means of water addition;

Off flavour fresh milk in the retail;

Labeling of fat spreads by using terminology "butterly" as part of trade name.

All complaints were documented and investigated.

***No Non-achievements / underperformance has been reported***

## **Goal 3 - Special investigations**

## Achievements

Special investigation regarding the addition of milk powder and milk protein concentrates to fresh milk and UHT milk – the project was rescheduled due to the approval of a separate project approved by Milk SA relating to food (dairy fraud) in the retail industry in 2017.

An initial investigation regarding extended shelf life of cultured milk products was completed during the second quarter of 2017. The work was followed up with a more extensive sampling and test regime relating to the use of products such as Natamycin and other preservatives not permitted by regulation in cultured milk.

Determination of the status of Aflatoxin M1 presense in milk sold to consumers – Project commenced during August 2017 and will be completed May 2018. 38 Samples were submitted for analyses during the fourth quarter of 2017.

Industry Testing for Listeria Monocytogenes:

DSA took note of the increase in Listeriosis through its risk identification monitoring program (Goal 4). The following actions were initiated as a pro-active response to determine whether or not the dairy industry was effected by this outbreak.

The analyses request letter as received from the Director Generals office was e-mailed to the organized dairy industry.

An internal sampling programme was implemented in order to identify and sample milk sold by all suppliers irrespective whether or not they form part of the organized dairy industry. Monitoring activities are to continue in 2018 on a risk based approach.

In view of the seriousness of the matter and to assist industry to act in a food safety preventative manner, a guideline document is to be developed in the first quarter of 2018 focussing specifically on Listeriosis.

## No Non-achievements / underperformance has been reported

### Goal 4 - Milk and other dairy products: Risk identification

#### Achievements

DSA compiled comprehensive statistical reports following the completion of each quarterly cycle. The reports were interpreted to determine possible industry specific food safety risks. All cycle results indicating non-conformances were subsequently communicated to the respective health authorities.

Reports on non-conforming results were forwarded to the respective government departments at the end of each cycle. Each participating municipality received a quarterly report on the analysis done of samples submitted. Non-conforming processors as well as processors whose contact details were verified and who requested to receive test results were provided with individual test reports. Quarterly reports to health authorities are indicated in Table 2 below:

Table 2

Province	Total
MP	82
LP	79
WC	89
NW	109

GA	118
FS	116
NC	72
KZN	75
EC	101

The DSA national dairy monitoring program provides for the sampling of the categories namely packed pasteurised and unpasteurised milk and retail bulk pasteurised and unpasteurised milk as well as other dairy products. Relevant information regarding food safety and compositional standards for milk and other dairy products were communicated to the dairy industry and other organisations.

#### NATIONAL AND INTERNATIONAL FOOD SAFETY AND RECALL MONITORING

International food risk monitoring - The following websites and RSS feeds\* were monitored on a weekly basis for possible food safety scares that might affect the local dairy industry:

[www.foodproductiondaily.com](http://www.foodproductiondaily.com)

[www.dairyreporter.com](http://www.dairyreporter.com)

FSA newsletters and alerts

Dairy Markets monthly newsletter

[www.fda.gov/Safety/Recalls/](http://www.fda.gov/Safety/Recalls/)

[www.foodqualitynews.com/...Alerts/](http://www.foodqualitynews.com/...Alerts/)

[www.foodqualitynews.com/Food-Alerts/New-evidence-calms](http://www.foodqualitynews.com/Food-Alerts/New-evidence-calms)

[www.dairysafe.vic.gov.au/](http://www.dairysafe.vic.gov.au/)

[www.foodsafety.gov](http://www.foodsafety.gov)

[www.thefoodsafetynetwork](http://www.thefoodsafetynetwork)

International Food Safety Authorities Network (INFOSAN)

European Union Rapid Alert System for Food and Feed (RASFF) – newsletters

Google Alert - food poisoning: Food Production Daily

[www.foodpoisonjournal.com](http://www.foodpoisonjournal.com);

[www.foodsafetynews.com](http://www.foodsafetynews.com);

[www.recalls.gov.au](http://www.recalls.gov.au);

[efoodalert.net](http://efoodalert.net);

[www.fastmoving.co.za](http://www.fastmoving.co.za)

The focus remained on raw milk and milk products due to prevailing high trend of non-conformances detected as a result of the DSA National milk monitoring program in collaboration with Health Authorities. Industry reports since end 2016 on the prevalence of Brucellosis in milk herds in certain provinces and consumption of unpasteurised and decontaminated pasteurised retail bulk milk with specific reference to Listeriosis remains a further public health concern and information in this regard has been communicated to the Department of Health.

\*RSS (Rich Site Summary) uses a family of standard web feed formats to publish frequently updated information: blog entries, news headlines, audio and video.

### ***No Non-achievements / underperformance has been reported***

#### **Goal 5 - Remedial action programs with processors and distributors**

##### ***Achievements***

Quarterly milk and other dairy product sample results once processed were forwarded to the

respective PD's and processors/manufacturers. These activities were followed by means of interaction with PD's and processors/manufacturers regarding non-conforming test results as well as recommendations for corrective actions. Communication is done either by means of a telephone call, e-mail report, posted report or a visit to the facility. Environmental Health Practitioners (EHP's) were also requested to communicate all test results to the relevant parties. DSA technical personnel provided the respective processors and producer/distributors and retailers (milk shops) with comprehensive reports after the visits that are also used for further reference purposes.

Table 3

Province	Number of facilities that received visits
MP	42
LP	30
WC	12
NW	55
GA	50
FS	32
NC	2
KZN	34
EC	0

\* Producer distributors (PD's) are defined as milk producers that are also engaging in the packing, distribution and selling of milk whether raw or as heat treated milk and may include other dairy products.

## ***No Non-achievements / underperformance has been reported***

### **Goal 6 - Communication with the authorities and other organisations**

#### ***Achievements***

#### **a. Department of Health: Directorate Food Control**

DSA served as standing member on the Food Legislative Advisory Group. In its supportive role, DSA assisted the industry with a substantial amount of queries relating to food labelling requirements as well as dairy technical matters, which in several cases resulted in facilitation processes with the Directorate Food Control. Related matters included dairy product enrichment and various regulations relating to sugar, sodium reduction and additives. Results of consultation with DOH included confirmation on the legal status regarding payment requests for the issue of certificates of acceptability and inspections by certain health authorities in terms of milk shed regulations which was communicated to industry.

#### **b. Municipal Health Authorities**

Communication with the municipal health authorities based on information obtained from project 1 was continuous through the year and primarily focused on the implementation of remedial action on non-conforming/substandard milk and other dairy products. Interactions with Environmental Health Practitioners were also used to encourage information and education sessions as an industry initiative to promote the improvement of milk and other dairy product safety and quality. The illegal sale of raw milk as well as sale of milk of substandard quality (food safety) remained a priority. DSA presented at the Eastern Cape Environmental Health Summit at the Nelson Mandela University, Port Elizabeth regarding the food safety status of milk and other dairy products in South Africa.

#### **c. Department of Agriculture, Forestry and Fisheries (DAFF)**

##### **i) Directorate: Inspection Services (IS)**

Cycle results regarding infringements in terms of the Regulations relating to dairy and imitation dairy products, as a result of the DSA national monitoring program were communicated to the Guardian Manager for the Agricultural Products Standards Task Team of the Directorate.

Misleading claims, incorrect composition and labelling of dairy products continued to serve as priority.

ii) Directorate Food Safety and Quality Assurance – FSQA (policy making)

Communication with FSQA continued regarding dairy product composition queries, interpretation of the new Regulations relating to dairy and imitation dairy products and the standards and requirements relating to export of dairy products. Follow up facilitation processes and interpretation of matters such as industry dispensations relating product compositional standards and labelling requirements and formal communication with industry via the Regulations and Standards Project of Milk SA were continuous.

The appointment of the Assignee in terms of the Agricultural Product Standards Act, regarding the enforcement of the compositional standards for dairy and imitation dairy as well as edible ice products resulted into extensive consultation between DAFF, Milk SA representatives (of which the chairman and project manager of the Regulations and Standards Project of Milk SA played a leading role) and the Assignee.

iii) Directorate Animal Health

DSA liaison with the directorate included communication regarding chemical residue monitoring programme. A formal meeting took place on 5 May 2017 during which options were discussed to review the current dormant residue milk monitoring programme of DAFF with the assistance of the organised dairy industry. Further liaison took place on import requirements and the application of the Veterinary Procedural Notice 20, Standards for the registration of a veterinary approved dairy establishment for export.

d. National Regulator for Compulsory Specifications (NRCS): Legal Metrology

Standard procedure provided for quarterly reports regarding metrology infringements to the Senior Manager, inspections: Legal Metrology NRCS for further action.

e. Perishable Product Export Control Board (PPECB)

Following the facilitation processes that took place during 2016 and 2017 the Standard Operating Procedure on the inspection of dairy products destined for export in terms of the Agricultural Product Standards Act were signed off and communicated to the organised dairy industry. Information sessions by PPECB and dairy exporters is scheduled for 2018.

f. South African Bureau of Standards (SABS).

DSA continued to serve on the Technical Committee SABS TC 70/SC 4, Legal Metrology - sale of goods as well as the SABS TC 034 SC 17 Food products – Hygiene practices in the food industry and technical committee of the SABS TC 1094, Livestock welfare, developing SANS 1694, Standards relating to the welfare of dairy cattle which was published in December 2017 for public comment. DSA participated in the balloting of draft standards as well as further provided comment on drafts namely SANS 10049, SANS 10330, SANS 1678 and 1679 relating to pasteurised and sterilised milk and the ISO standards 22002/3 and 22002/6 relating to safe farming practises and production of food. Outcomes of meeting where applicable were communicated to the Regulations and Standards Project of Milk SA.

Milk SA, MPO and SAMPRO

DSA attended the Milk SA Advisory Committee meetings on which it serves and also interacted on a regular basis with the project managers of the Milk SA Consumer Education Project and SAMPRO Training. During the second quarter DSA consulted regularly with the organised dairy industry via the Regulations and Standards Project of Milk SA regarding regulatory matters and the Transformation Project of Milk SA on facility assessment conducted on 13 April 2017 of a community based dairy in Limpopo. exhibited and attended the MPO Large Herds Conference 5-7 June 2017.

DSA presented at two MPO Herd management courses on food safety at Cedara and Dundee.

As standing arrangement, DSA continued to meet regularly with the Consumer Education Project Manager to discuss relevant issues. During the fourth quarter DSA consulted regularly with the organised dairy industry via the Regulations and Standards Project of Milk SA with specific reference to the appointment of the DAFF Assignee and regulatory matters. Additional work took place as Milk SA projects. These additional projects are separate registered as Milk SA projects and reported on under the following project headings:

Investigation into the establishment of infrastructure regarding supply of standardised standards used for the calibration of laboratory equipment in the local dairy industry.

Special investigation into food fraud: adulteration of local and imported milk and other dairy products.

Investigation into the dairy industry's participation the continuation and maintenance of the



National Chemical Residue Monitor Program (NCRCP).

CGCSA: FSI – DSA as member of the Food Safety Initiative (FSI) interacted on a regular basis with management regarding share of regulatory information. Matters related to regulations under the Foodstuffs, Cosmetics and Disinfectants Act, Agricultural product Standards Act and the DAFF appointed Assignee.

ESADA – DSA participated and presented in the Africa Dairy Conference and Exhibition in Gauteng 15 to 17 November 2017.

IDF – DSA MD is a member of SANCIDF and of the IDF Standing Committee: Standards of Identity and Labelling and provide inputs to SANCIDF electronically. The SANCIDF meeting was attended on 29 March 2017 with feedback reports regarding the IDF standing committee and IDF WDS in Rotterdam in 2016.

The following IDF request for inputs towards Codex matters received specific attention:

Standard of dairy permeate powder;

Processed cheese;

Labeling of nonretail containers;

Front of pack labeling;

Food authenticity.

SANCU - DSA presented at the AGM of SANCU and regularly communicated with the SA National Consumer Union regarding dairy food safety and quality related issues as and when required.

SASDT – The MD served on the management of the Northern branch of the SASDT. DSA attended Northern as well as Western Cape meetings and exhibited and presented at the SASDT National Symposium in 2017.

SaaFoST – DSA staff members attended the SaaFost 22nd Biennial International Congress and Exhibition from 3-6 September 2017 and interacted by sharing technical information relating to the Listeriosis crisis with members of SaaFost.

Tertiary institutions – DSA serves as a member of the Advisory Boards of the Departments of Environmental Health of the Tshwane University of Technology as well as Nelson Mandela Metropolitan University. The purpose of the advisory boards is to give industry inputs and assist the universities with the development of course material for Environmental Health Practitioners. Two meetings were attended on 15 and 25 May 2017.

## ***No Non-achievements / underperformance has been reported***

### **Goal 7 - Liaison on legislation with authorities and other organisations**

#### ***Achievements***

Although a blended role of activities exist it is important to note that the work of the Regulations and standards project of Milk SA project is not a duplication of this DSA project. The fundamental difference of Project 7 relates to the relationship and involvement of DSA as self-regulatory initiative with government structures and execution of the law. The Regulations and standards Project of Milk SA relates to participation in the formalisation of draft regulations and standards and comments on regulatory matters, as well as communication through Milk SA in the interest of the dairy industry and other stakeholders.

DSA continued liaison with the authorities regarding the following legislation and standards:

#### **1. Department of Health: Directorate Food Control: Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972)**

New draft Regulations on Hygiene Requirements for Food Premises and the Transport of Food.

#### **2. Department of Agriculture, Forestry and Fisheries: Agricultural Product Standards Act, 1990 (Act 119 of 1990)**

Regulations relating to the classification, packing and marking of dairy products and imitation dairy products intended for sale in RSA (R260/2015) and dispensations.

DAFF appointed assignee i.t.o. the APS Act.

PPECB as assignee in terms of the Regulations regarding control of the export of animal



products, R422 of 22 May 2015, Finalisation of SOP.

### 3. Non-compulsory South African National Standards – SABS

SANS 10049: 2012 – Edition 4, Food safety management - Requirements for prerequisite programs (PRPS).

SANS 10330: Food safety - Requirements for a Hazard Analysis and Critical Control Point (HACCP) system.

SANS 1678 and 1679 Pasteurised and Sterilised Milk.

### 4. Compulsory South African National Standards – SABS

SANS 289 ED 1.6: Labelling requirements for prepackaged products (prepackages) and general requirements for the sale of goods subject to legal metrology control.

Adoption of ISO standards referred to in the R260/2015 Regulations relating to the classification, packing and marking of dairy products and imitation dairy products intended for sale in the Republic of South Africa, R260 of 2015 under the Agricultural Product Standards Act, 1990 (Act 119 of 1990) as SA National Standards by the SABS.

### 5. Codex Alimentarius and ISO

ISO/TS 22002-3:2011 - Prerequisite programs on food safety - Part 3: Farming

ISO/TS 22002-6:2016 - Prerequisite programs on food safety - Part 6: Feed and animal food production.

### 6. Treasury Department

Publication of the Rates and Monetary Amounts and Amendment of Revenue Laws Bill - Health Promotion Levy” and subsequent SARS published levies for public comment.

### 7. DSA Technical Committee

The technical workgroup committee activities in 2017 were mainly relayed to the Milk SA projects relating to the investigation into the establishment of infrastructure regarding supply of standardised standards used for the calibration of laboratory equipment in the local dairy industry and special investigation into food fraud: adulteration of local and imported milk and other dairy products.

## ***No Non-achievements / underperformance has been reported***

## **Goal 8 - Information and education**

### ***Achievements***

DSA presented information sessions based on the DSA Code of Practice and related guideline materials to professional EHP's as well as 263 student EHP's, on a national level, at the respective tertiary institutions. These information sessions are also available to other professions and government/municipal officials, milk producers, processors and distributors that require information regarding food safety and quality standards on a national level.

Date	University	Amount of students attending
30 and 31 August 2017	CPUT	19 students
24 May 2017	DUT	24 students
25 May 2017	MUT	31 students
2 and 9 June 2017	UJ	45 students
4 and 11 September 2017	TUT	59 students
17 August 2017	CUT	71 students
21 September 2017	NMU	14 students

Two information sessions were held at the University of Pretoria main campus and Onderstepoort to 3rd and 4th year students respectively.

One workshop with the professional EHP's of the Kouga Municipality was held on 30/31 November 2017.

***No Non-achievements / underperformance has been reported***

## **Goal 9 - Media communication**

### ***Achievements***

DSA signed contractual agreements with Veeplaas and Agri Connect. Project work resulted in 7 advertisements, 6 advertorials, 3 talks on national radio stations, 2 Milk SA Essay booklet publications and television broadcast.

***No Non-achievements / underperformance has been reported***

## **Goal 10 - Development of guideline documentation**

### ***Achievements***

The following guideline documents were revised during 2017:

DSA Retail Bulk Milk Guidelines

DSA Guidelines for the interpretation of quality problems in milk

DSA Code of Practice of the Secondary Industry

Due to amendment in legislation and voluntary standards the documents will only be published early 2018.

***No Non-achievements / underperformance has been reported***

## **Goal 11 - Milk SA Regulations and Standards Project**

### ***Achievements***

The management committee of the project continuously interacted with electronic correspondence to the members of the Advisory Committee on a regular basis. Where applicable, outcomes of correspondence were forwarded to the organised dairy industry on an informative basis or requesting comments on regulations and standards. Priority was given during the fourth quarter to the facilitation of the process regarding the appointment of the Department of Agriculture, Forestry and Fisheries Assignee and subsequent publication of proposed inspection fees and standard operating procedures relating to inspection and sampling. Matters dealt with under this committee included:

Request for industry dispensations regarding technical product specifications.

Regular interaction and meeting between the Management Committees of the Regulations and Standards and Customs Duty and Market Access Advisory Committees took place with the following agenda items shared:

DAFF assignee APS Act R260/2015;

DAFF assignee PPECB SOP;

Dairy import requirements - SADC countries;

SANS standards regarding dairy cattle and welfare;

Appointment of DAFF assignee;

Treasury and sugar tax legislation.

As previously noted in this report this project is not a duplication of the DSA Project goal 7, Title: Liaison on legislation with authorities and other organisations, as the fundamental difference of

Goal 7 relates to the relationship and involvement of DSA as self-regulatory initiative with government structures and execution of the law. The Regulations and standards Project of Milk SA relates to participation in the formalisation of draft regulations and standards and comments on regulatory matters, as well as communication through Milk SA structures in the interest of the dairy industry and other stakeholders.

***No Non-achievements / underperformance has been reported***

## Income and expenditure statement

Income and expenditure statement	<a href="#">Desember 2017 - BI 1-4.pdf</a> <a href="#">Desember 2017 - BI 5-7.pdf</a> <a href="#">Desember 2017 - BI 8.pdf</a> <a href="#">Desember 2017 - BL 9.pdf</a> <a href="#">Desember 2017 - Voorblad.pdf</a> <a href="#">CORFIN078 Std Quaterly Report - Project Advances - PRJ 0144 Regulations &amp; Standards - December 2017.xlsx</a>
Unnecessary spending during period	No

## Popular Report

[DSA Annual Popular Report for 2017 .pdf](#)

## Additional documentation

[DSA Annual Report for 2017 - .pdf](#)

## Statement

Levy funds were applied only for the purposes stated in the contract	No
Levy funds were applied in an appropriate and accountable manner	No
Sufficient management and internal control systems were in place to adequately control the project and accurately account for the project expenditure	No
The information provided in the report is correct	No