



4sustainability® is an innovative implementation framework and a registered mark assuring the sustainability performances of fashion & luxury supply chain.

The framework is built and continuously updated in line with the best methodologies, standards and practices.



Lanificio Bigagli S.p.a.  
has joined the 4sustainability® Commitment  
and applies the 4s CHEM Protocol  
for eliminating toxic and harmful substances in production  
through the ZDHC MRSL.

## CHEM IMPLEMENTATION LEVEL



**COMPANY ID Nr.**

4S-100082

**ASSURANCE RATING:**

88%

**VERS. PROTOCOL CHEM:**

4.2

**ISSUE DATE:**

03/04/2023

**EXPIRATION DATE:**

03/04/2024

Issue by:  
Process Factory s.r.l.  
Via A. Da Noli, 4/6 - 50127 Firenze  
CF/P.IVA: 058052004





# ABSTRACT

## 4s Assurance Report Chemical Management Version 4.2



Lanificio Bigagli S.p.a.

### 4s REQUIREMENTS

#### Management system

Evaluating the implementation of a chemical management system within the company. The verified requirements range from the presence and communication of an internal sustainability policy, to staff training, as well as to the definition of reduction targets and monitoring of over-time performance.

#### Chemical risk management

Assessing chemicals risk management within the factory. The verified requirements measure the chemical inventory information management, the related qualification level to ZDHC MRSL 2.0, and related pahse put plan and improvement plan.

#### Materials risk management

Assessing the management and control system of incoming materials and their compliance level with 4sustainability PRSL, as a tool for reducing the risk of incoming contamination in the production process.

#### Supply Chain assessment

Evaluating the company's supply chain management and assessment. The verified requirements measure the mapping activity, qualification, engagement, training and monitoring of subcontractors and material suppliers and all the procedures in place.

#### Process management

Assessing the production processes management and traceability. The verified requirements measure the correct functioning of the internal traceability system and its digitalization. Moreover it includes processe due-diligence tests in order to monitor contamination on the products.

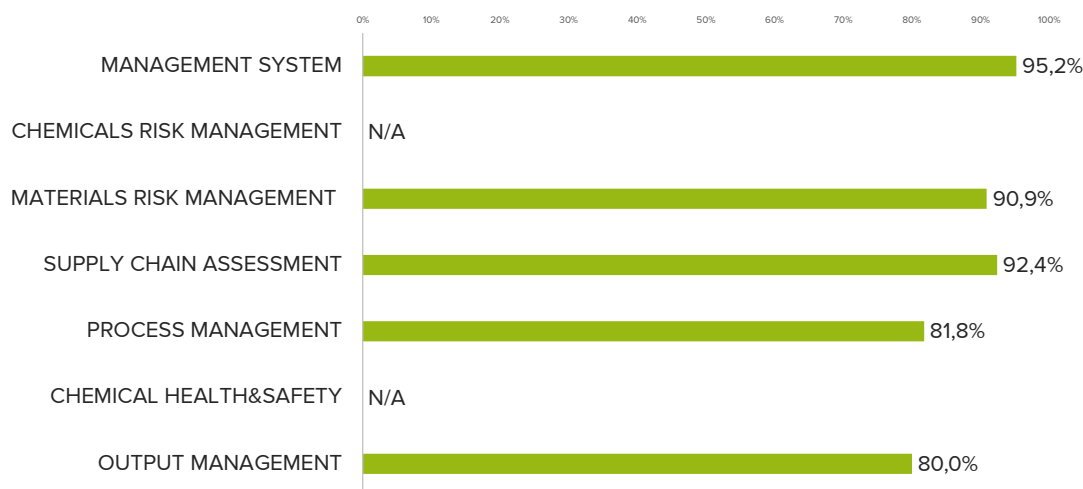
#### Chemical Health&Safety

Assessing health and safety requirement linked to chemical management. The verified requirements range from labeling, handling and storage of chemical products within the factory, to emergency procedure and waste management.

#### Output Management

Evaluating the company management of process output. The verified requirements range from legal permission for emission to the control of waste water according to ZDHC Guidelines. for internal and external processes and final product testing.

### 4S REQUIREMENT - IMPLEMENTATION LEVEL



### ASSURANCE RATING



88%

### ASSURANCE DATE

22/03/2023

## PRODUCTION MODEL

The company manufactures and sells fabric.  
The company carries out internal processes of carding, needling and coupling.  
and outsources processes of dyeing, finishing and washing.

Name of Internal Chemical Manager:

Enrico Gianni

ZDHC accredited training course and date:

ZDHC Top Ten Issues Marzo 2021 - C81E6587408

## INPUT

### CHEMICALS

% of wet processes carried out internally out of the total workload

0%

% outsourced wet processes - CI VERIFIED by audit

95%

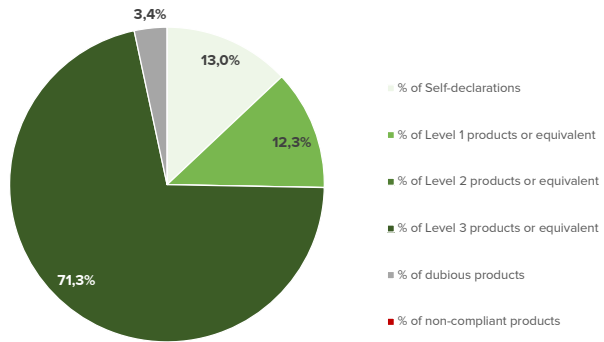
% outsourced wet processes - CI VERIFIED by remote assessment

0%

% outsourced work - missing CI data

5%

### VERIFIED CHEMICAL INVENTORY - SUPPLY CHAIN AVERAGE



TOT n. of verified chemical inventory:

2

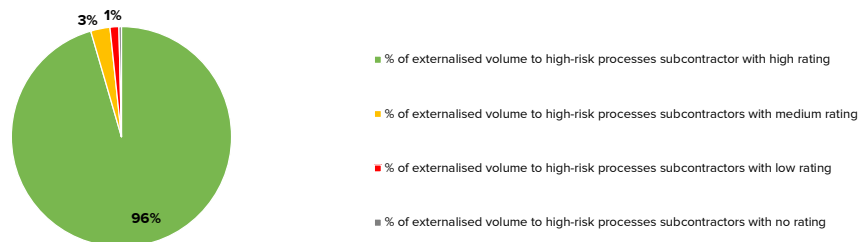
### RAW MATERIALS

#### RAW MATERIALS SUPPLIERS RATING



## PROCESS

#### CHEMICAL HIGH-RISK EXTERNAL PROCESSES SUBCONTRACTORS RATING



## OUTPUT

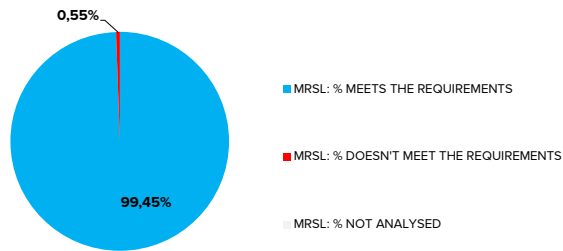
### EXTERNAL WASTEWATER

#### SUBCONTRACTOR 1

% OF EXTERNALISED PROCESSES: **66%**

CETP (Central Effluent Treatment Plant) - PRE TREATMENT MONITORING (Raw waste water)

##### MRSL Parameters



#### SUBCONTRACTOR 2

% OF EXTERNALISED PROCESSES: **29%**

CETP (Central Effluent Treatment Plant) - PRE TREATMENT MONITORING (Raw waste water)

##### MRSL Parameters

