

# GOTS ver 4.0

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## Chemical Risk Assessment

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**1st International GOTS Conference**  
**Strong Partnerships for Success**

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The Lalit, Sahar, Mumbai, India



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# Agenda

- GOTS Technical Requirements
- Requirements for Chemicals
- Testing & GOTS
- Risk Assessment for GOTS Goods





# GOTS ver 4.0 Technical Requirements

## 2.1 Organic Fibre

## 2.3 Restrictions in Chemical Inputs at all stages

## 2.4 Processing Requirements and Test Parameters

*2.3.3 is of particular interest to us and we will explore that in some detail.*



# Requirements for Chemicals

- **2.3.1 Prohibited & Restricted Inputs**
  - *Specifically listed substances*
- **2.3.2 Requirements related to hazards & toxicity**
  - *Chemicals classified under specific R & H-phrases.*





## 2.3.3 Assessment of Chemical Inputs

- All Inputs intended to be used for GOTS Goods are subject to approval from an **approved** Certifier
- **Chemical suppliers** need to apply for approval
- **Preparations** (Dyes & Chemicals) need to be evaluated and trade names registered.
- **MSDS** as per norms is required
- Another important source of information : **Independent Lab Testing.**



# What are the chemical parameters that need to be considered in assessment and testing of chemicals & Dyes ?



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# Risks for pretreatment chemicals

- Chlorophenols
- Heavy Metals
- Organotins
- APEOs
- Fungicides
- GM Starch

# Main Risks for Dyes & Pigments

- Banned Amines
- PCP
- Organotins
- Heavy Metals
- Phthalates (printing systems)
- APEOs
- Fungicides
- AOX





# Some Risks for Finishing Chemicals

- Formaldehyde
- Glyoxal
- Heavy Metals
- Chlorinated Phenols
- APEOs
- Fungicides



# Other risks

- MSDS / declarations
- **Formulations**
- Different names / same chemical
- **Same name / Different chemical**
- Same chemical / Different concentrations
- **Validity of Test Reports**
- Sampling & Inspection
- **Follow-up Checks**

# Role of Certification Bodies

- **CB's are fully responsible for all certification that they do.**
- **Consumers of Organic Products are a discerning lot.**
- **Successful programmes (like GOTS) are always under strict scrutiny.**
- **This scrutiny is increasingly becoming all pervasive - by consumers, consumer activists and the NGOs**
- **Certifiers have a lot to answer for.**



## Section 4.2 of GOTS

***“Certified Entities are expected to undertake testing in accordance with the risk assessment in order to assure compliance with this standard and in specific with the criteria of Chapter 2.4.14 and 2.4.15 and 2.4.16”***



*GOTS Manual Chapter 4.2 points out factors to be considered in appropriate risk assessment analysis*

# Risk in Risk Assessment

- **Who ?** (Who am I auditing?)
- **How ?** (What process am I using?)
- **What ?** (What is being audited?)
- **Where ?** (Where is this audit being done?)
- **Why ?** (Why is this audit necessary?)
- **When ?** (What stage is this audit being done?)



# Risk Assessment : theory

- Risk assessment is the determination of *quantitative or qualitative value of risk* related to a concrete situation and a recognized threat.
- Quantitative risk assessment requires calculations of two components of risk
  - the *magnitude* of the potential loss
  - and the *probability* that the loss will occur.

Source : Wikipedia



# Risk Assessment : the CB's view

- How do you assess an auditee ?  
Do you **believe** the auditee ?  
Or do you **verify** the veracity of auditee ?
- Risk Assessment based verification is probably the safest way.





# Why Testing ?

- **Technical requirements are a part of GOTS.**
- **Verification needs documented compliance.**
- **In the absence of verifiable documents, testing may be necessary.**
- **Inadequate information submitted by applicants**
- **Everything cannot be physically verified**
- **Testing could be used as a quality control tool**





# GOTS Goods Requirements & Testing

## (2.4.14)

- Rubbing fastness, dry and wet
- Perspiration fastness, alkaline and acid
- Light fastness
- Saliva fastness
- Washing fastness
- Dimensional changes



[http://l-t-p.com/wp-content/uploads/2013/12/GOTS\\_IMAGE.jpg](http://l-t-p.com/wp-content/uploads/2013/12/GOTS_IMAGE.jpg)

## GOTS Goods – Residues (2.4.15)

- Banned amines
- AOX
- Allergenic Dyes
- Carcinogenic Dyes
- Formaldehyde
- pH value
- Chlorophenols
- o-Phenyl phenol
- Pesticides
- Lead & Cadmium
- Extractable Heavy Metals
- Organotins
- Phthalates
- Polycyclic Aromatic Hydrocarbons



## Additional Materials & Accessories (2.4.16)

- Banned amines
- AOX
- Allergenic Dyes
- Carcinogenic Dyes
- Formaldehyde
- pH value
- Chlorophenols
- o-Phenyl phenol
- Pesticides
- Lead & Cadmium
- Extractable Heavy Metals
- Organotins
- Phthalates
- Polycyclic Aromatic Hydrocarbons

# Risks for GOTS Goods

- Assurance of Compliance to Requirements
- Continued Assurance
- Sampling procedures / Inspection
- Follow-up checks



# Risks in Ginning / Spinning / Yarn

- Pesticides
- Fungicides
- Chlorinated Phenols
- Fibres from GM Crops



# Risks for Grey Fabric

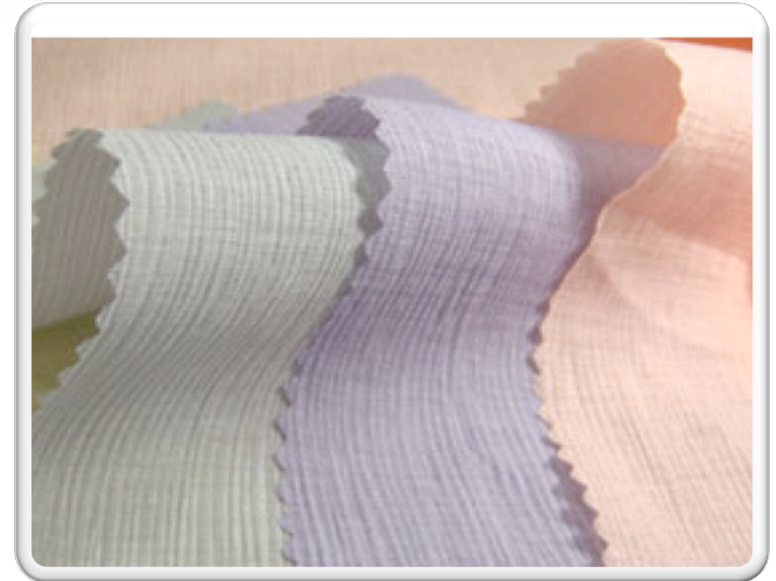
- Pesticides
- Chlorinated Phenols
- Fungicides
- APEOs



<http://www.jafinternational.net/css/images/offer-image-5.jpg>

# Risk for Processed Fabrics

- Banned Amines
- Heavy Metals
- Formaldehyde / Glyoxal
- Chlorinated Phenols
- Phthalates
- APEOs
- pH value
- Fastness and other parameters







# Risks for End Products

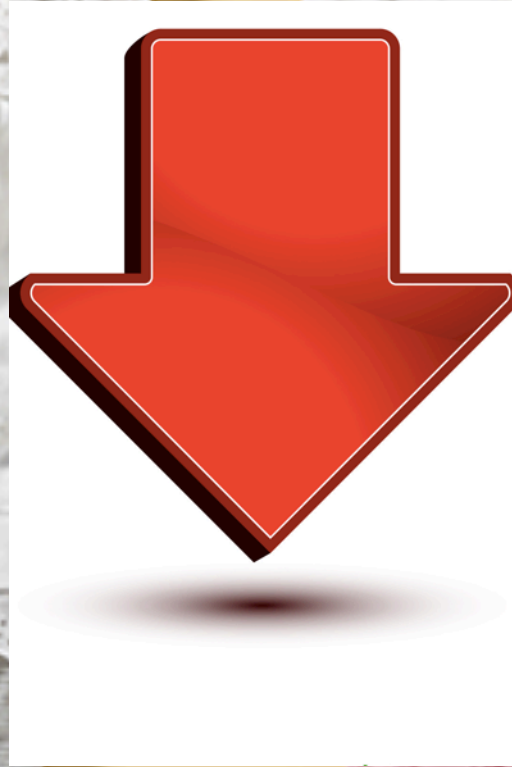
- Banned Amines
- Heavy Metals (Extractable & Total)
- Formaldehyde / Glyoxal
- Chlorinated Phenols
- Phthalates
- APEOs
- pH value
- Fastness & Tech Parameters
- Nickel Release (Metal Accessories)



<https://s-media-cache-ak0.pinimg.com/236x/79/4e/aa/794eaa41faeabb50c1334d9cod4d02c9.jpg>



# Clean Inputs



# Clean Products

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Sourcing & Product | Transport Logistics



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<http://pure-collection.ernstings-family.de/content/03-kollektion-jungs/21-hier-gehts-zur-maedels-kollektion/zur-maedels-kollektion.png>

# Remember

- GOTS is now version 4.0
- Testing requirements and limit values will undergo some change in 2017.

**Requirements are never static.  
They change all the time.**



# So, what does this mean ?

- This presentation may change over a period of time.
- You have to sit through this presentation again !



<http://static.gizc-blog.org/images/blog/surprise-interview-questions.jpg>

# Questions ?

**Happy to help !**

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# Thank You.

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