

# 14<sup>th</sup> IBD Africa Section Convention In-Process Sensory Evaluations

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## Introduction

Sensory evaluations often concentrate on the flavour attributes of the final product, giving the beer the final 'human stamp of approval' before it goes to market. However, sensory evaluation should be conducted throughout the whole brewing process from raw materials and water supplies right up to market release. In-process sensory evaluations are an invaluable part of the brewing process. Detecting a problem as quickly as possible is essential to limiting product line disruption, expenditure and damage to the brand name. 'In-process' sensory evaluations will not only detect an unwanted flavour attribute, but their results should be used to troubleshoot and define the source origin of the problem. Sensory evaluations can save the brewery both time and money and they will ensure the product released to market is consistently high quality.

## Aims of in-process evaluations

Provide a defence against off-flavours and taints in the final product  
Detect and identify underlying problems in the process  
Pinpoint the location in the process at which the problem has arisen  
Prevent the flavour problem from occurring again

## Anybody can be an in-process sensory panellist

No prior sensory knowledge required before training  
Use existing human resources  
Affordable to everybody  
5 day taster training course sufficient to create in-process sensory panel

## Flavours contaminating process water\*

Attribute	Notes	Main risks	Occasional risks
Metallic	Fe or Cu	X	
Chlorine	Free chlorine	X	
Fishy	Amines	X	
Sulphury	H <sub>2</sub> S, mercaptans	X	
Ammonia	Ammonia	X	
Chlorophenol	Chlorophenol	X	
Bromophenol	Bromophenol	X	
Iodophenol	Iodophenol		X
Musty	Various, including TCA, TBA, ,2-methylisoborneol, geosmin etc	X	
Inky	Trihalomethanes	X	
Earthy	2-Ethyl fenchol and others	X	
Mineral oil	Hydrocarbons, methyl tertiary butyl ether (MTBE)	X	
Salty	NaCl ("Brackish")	X	
Green pepper	Methoxypyrazines		X
Raspberry	Raspberry ketone		X
Violets	Beta-Ionone		X
Coconut	Contamination with <i>Gardenia tahitensis</i>		X
Diacetyl	Diacetyl		X
Watermelon	Unknown		X
Grassy	Various alcohols		X
Cucumber	Unknown		X

## Flavours contaminating process gasses\*

Attribute	Notes	Main risks	Occasional risks
Metallic	Fe or Cu (corrosion-related)	X	
Sulphury	H <sub>2</sub> S, mercaptans, other thiols	X	
Musty	Various, including TCA, TBA, ,2-methylisoborneol, geosmin etc	X	
Earthy	2-Ethyl fenchol and others	X	
Mineral oil	Hydrocarbons (oily)	X	
Diacetyl	Diacetyl (growth of lactics in the line)		X
Estery	Isoamyl acetate, ethyl acetate, ethyl hexanoate, ethyl butyrate		X
"Acidic"	Claimed to be due to moisture in CO <sub>2</sub> line		X

## Flavours contaminating filter aids\*

Attribute	Notes	Main risks	Occasional risks
Metallic	Fe or Cu	X	
Sulphury	H <sub>2</sub> S, mercaptans		X
Chlorophenol	Chlorophenol		X
Bromophenol	Bromophenol		X
Musty	Various, including TCA, TBA, ,2-methylisoborneol, geosmin etc	X	
Earthy	2-Ethyl fenchol and others	X	
Mineral oil	Hydrocarbons		X
Sea-Urchin egg-like flavour	2-Ethyl bromophenol		X

\*Information based on a survey conducted by FlavorActiV in June 2007