



National Institute for Public Health  
and the Environment  
*Ministry of Health, Welfare and Sport*



## Tobacco additives: PITOC and EMTOC

Reinskje Talhout  
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# Tobacco products

Attractive, addictive and toxic

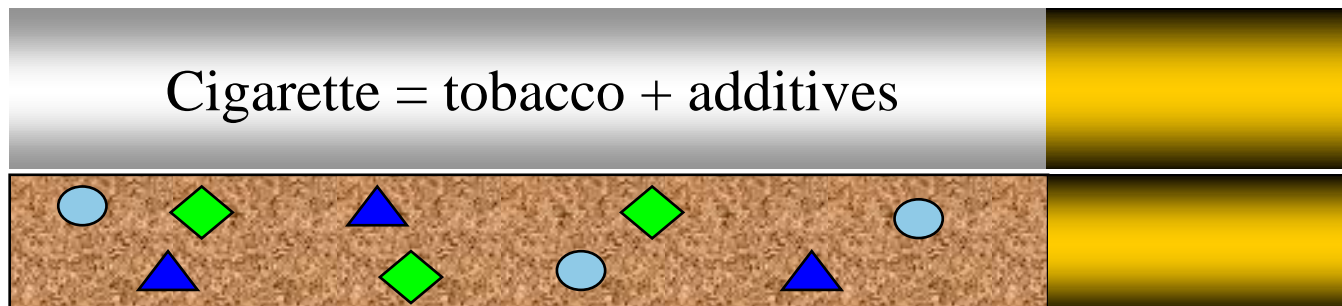
- Natural tobacco ingredients (>2500)
- Tobacco additives (~600)
- Smoke components (>6000)
- Design properties, e.g. filter ventilation





# Cigarette additives

- ~600 different additives
- E.g. glycerol, sugars, cocoa, licorice, menthol, vanilline, cellulose
- Most important functions:
  - Improve taste
  - Moisturize tobacco
  - Bind product
- Differ per brand, average 25 in tobacco, up to 10% of weight





## PITOC – Public Information Tobacco Control

- Reduction of smoking-related morbidity and mortality
- Disseminate tobacco additive information (Directive 2001/37/EC)
- Addiction prevention through information disclosure
  - increase awareness that tobacco products contain additives
  - inform on **function** and **health effects** of selected **additives**



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**dkfz.**

GERMAN  
CANCER RESEARCH CENTER  
IN THE HELMHOLTZ ASSOCIATION

*This initiative has received funding from the European Union in the framework of the Health Programme*



## Partners PITOC

### **RIVM, coordinator, create fact sheets**

Anne Kienhuis, Lya Hernandez, Reinskje Talhout

RIVM, The Netherlands

WHO Collaborating Centre for Tobacco Product Regulation and Control

### **DKFZ, create fact sheets**

Martina Pötschke-Langer and Urmila Nair

Cancer Research Center (DKFZ), Germany

WHO Collaborating Centre for Tobacco Control

### **Translate and disseminate**

Public institutions in 16 European countries: Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Malta, Netherlands, Norway, Romania, Switzerland, Turkey, Poland, UK



# PITOC – Public Information Tobacco Control

Function and effects of 14 tobacco additives

## **Humectants**

Glycerol, Propylene glycol, Sorbitol

## **Flavours**

Cocoa, Furfural, Licorice, Menthol, Prune, Sugars, Vanillin, Carob bean

## **Binders**

Cellulose fibre, Guar gum

## **Other**

Ammonium compounds, acetaldehyde (smoke component)





# PITOC – Public Information Tobacco Control

Fact sheets for (semi-)professionals and general public

- Assessment of direct and indirect toxicity
  - Toxicity (dose-dependent)
  - Addictivity
  - Attractivity
- Translation for general public
  - Comprehensible
  - Correct message







# Results

- Two reports for professionals, 15 fact sheets for general public
- FS online in 9 countries, 5 to follow soon, 2 not yet known

Rijksinstituut voor Volksgezondheid en Milieu  
Ministerie van Volksgezondheid, Welzijn en Sport

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zoek

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### Tobacco additives: information for professionals

Publicatiedatum: 10-09-2012  
Wijzigingsdatum: 13-09-2012

**This report on seven tobacco additives, sugars, sorbitol, propylene glycol, glycerol, ammonium compounds, cocoa, furfural and the smoke components acetaldehyde, formaldehyde and acrolein, has been created by the National Institute for Public Health and the Environment (RIVM), Bilthoven, the Netherlands.**

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A report on seven other tobacco additives, menthol, carob bean, cellulose fibre, prune juice, vanillin, guar and licorice, has been created by the German Cancer Research Center, (DKFZ), Heidelberg, Germany. The introduction is a common product. The electronic version of that report can be found on the [DKFZ website](#).

The reports have been written in the context of the EU project Public Information Tobacco Control (PITOC). The reports aim to inform professionals on the general uses, tobacco industry uses and harmful health effects of selected tobacco additives. A version for the lay public has been based on the fact sheets in these reports. The originals of the laymen fact sheets (in English) can be found on the [RIVM website](#) and the [DKFZ website](#).

Download  
Tobacco additives: information for professionals  
Pdf document - 698KB

Startseite | Kontakt | Drucken | Impressum | Stemap | Downloads | English

**dkfz.** DEUTSCHES KREBSFORSCHUNGSZENTRUM IN DER HELMHOLTZ-GEMEINSCHAFT

Suchwort...

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Sie sind hier: Startseite > Über uns > Stabsstellen > Krebsprävention > Informationen zur Tabakkontrolle > Zusatzstoffe in Tabakprodukten Additives in Tobacco Products - EU-Projekt PITOC > Information on Health Hazards of Tobacco Products

### Additives in Tobacco Products / EU-Projekt PITOC


#### Information on Health Hazards of Tobacco Additives

Tobacco manufacturers add numerous additives to their products. Tobacco additives make a harmful product more attractive and palatable. The EU-Project Public Information Tobacco Control (PITOC) informs policy makers, journalists, and Non Governmental Organisations in a comprehensive report as well as the general public in a series of factsheets on the mode of action of selected additives and explains their impact on health.

Seven of these fact sheets have been created by the German Cancer Research Center (DKFZ), Heidelberg, and seven by the National Institute for Public Health and the Environment (RIVM), Bilthoven, the Netherlands. The introduction is a common product.

The World Health Organization Framework Convention Tobacco Control (FCTC) is in response to the world-wide tobacco epidemic and aims to contribute to the reduction of smoking-related morbidity and mortality. Article 9 and 10 of the FCTC are concerned with the regulation of tobacco product composition, including dissemination of information on tobacco products to the general public. The partial guideline of FCTC article 9 states that regulating ingredients aimed at reducing tobacco product attractiveness can contribute to reducing the prevalence of tobacco use and dependence among new and continuing users.

The EU Tobacco Products Directive 2001/37/EC prescribes that data on tobacco additives, submitted by manufacturers, needs to be disseminated to the consumers.



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#### Additives in Tobacco Products

Contribution of carob bean extract, cellulose fibre, guar gum, liquorice, menthol, prune juice concentrate and vanillin to attractiveness, addictiveness and toxicity of tobacco smoking

> Report Additives in Tobacco Products



# Turkey website <http://www.tapdk.gov.tr/>

**TAPDK DÜZENLEME KURUMU**

Anasayfa Kurum Hakkında Kurul Üyeleri Mevzuat Tütün ve Alkol Kontrolü Piyasa Düzenlemeleri Yayınlar Duyuru Etkinlik English

### TÜTÜN KONTROLÜ KAMUOYU BİLGİLENDİRMESİ

Anasayfa

**PITOC - Public Information Tobacco Control (Tütün Kontrolü Kamuoyu Bilgilendirmesi)**

<b>Hakkında</b>	Tütün endüstrisi, farklı tiplerde tütün mamullerini üreten ve satan birçok firmadan oluşur. Tüttürülen, çiğnenen, koklanan ya da pasif içicilikle içe çekilen tütün mamullerinin kullanımı, zayıflatan ve yaşamı tehdit eden hastalıklara hatta erken ölüme sebebiyet verir. Sigara, Avrupa Birliğinde (AB) en çok kullanılan tütün mamulüdür. Çoğu insan sigara içmenin zararlı olduğunu, kimisi dumanında (yüzürcesi) toksik olan binlerce madde ağza çıktığını bilmektedir. Ancak, insanların farkında olamayacağı, tütün üreticilerinin, sigaraya, sigara dumanının kimyasal oluşumunu etkileyen, tütünden farklı girdiler eklediğidir. Bu girdiler, tütün katkı maddeleri olarak bilinmekte ve raporlanarak kullanılmaktadır, örneğin,
<b>2-Furfural</b>	
<b>Amaçsız</b>	
<b>Asetaldehid</b>	
<b>Gliserol</b>	
<b>Guar Zıkmı</b>	
<b>Kakao</b>	
<b>Keçiboynuzu Ekstraktı ve Zıkmı</b>	
<b>Kuru Erik Suyu Konsantresi</b>	
<b>Mentol</b>	
<b>Meyanköku</b>	
<b>Propilen Glkol</b>	
<b>Seluloz Lif</b>	
<b>Sorbitol</b>	
<b>Sekerler</b>	amaçlarıyla eklenmektedirler.
<b>Vanilin</b>	Bazılarına göre, bu maddelerin tüketici ürününe eklenmesi son derece mantıklıdır.

- sigaraya özel bir lezzet vermek,
- sigaranın yanığını kontrol etmek,
- tütünü nemli tutmak, böylece kurumasını engellemek

**RESMİ İSTATİSTİKLER**

**AVRUPA BİRLİĞİ BİLDİRİM SİSTEMİ**

**TÜTÜN MAMULLERİ LİSTESİ**

**BAĞLANTILAR**

**RESMİ GAZETE**

**TAPDK**

Anasayfa Kurum Hakkında Kurul Üyeleri Mevzuat Tütün ve Alkol Kontrolü Piyasa Düzenlemeleri Dünya Dnyadan Misyon&Vizyon Faaliyet Raporu İletişim Bilgileri Duyurular



# Turkey website <http://www.tapdk.gov.tr/>

The screenshot displays the official website of the Tobacco and Alcohol Market Regulation Authority (TAPDK) of Turkey. The page is in Turkish and features the following elements:

- Header:** TAPDK logo, the text 'TÜTÜN VE ALKOL PİYASASI DÜZENLEME KURUMU', and a portrait of Mustafa Kemal Atatürk.
- Navigation Menu:** Anasayfa, Kurum Hakkında, Kurul Üyeleri, Mevzuat, Tütün ve Alkol Kontrolü, Piyasa Düzenlemeleri, Yayınlar, Duyuru, Etkinlik, English.
- Main Content Area:**
  - TÜTÜN KONTROLÜ KAMUOYU BİLGİLENDİRMESİ** (Tobacco Control Public Information)
  - Anasayfa** (Home)
  - PITOC - Public Information Tobacco Control (Tütün Kontrolü Kamuoyu Bilgilendirmesi)**: Includes logos for Turkey and the European Union.
  - Hakkında** (About): A list of chemical additives including 2-Furfural, Amonyum, Asetaldehid, Gliserol, Guar Zamkı, **Kakao**, Keçiboynuzu, Ekstraktı ve Zamkı, Kuru Erik Suyu, Konsantresi, Mentol, Meyanköku, Propilen Glükol, Suluoz Lifi, Sorbitol, Şekerler, and Vanilin.
  - Kakao**: A detailed article about cocoa, including its chemical structure, health benefits, and uses in food and cosmetics. It includes an image of cocoa beans and a wooden spoon.
  - Genel Kullanımı** (General Use): Information on the use of cocoa extract in chocolate and other food and beverage products.
  - Raporlanmış Tütün Endüstrisi Kullanımı** (Reported Tobacco Industry Use): Information on the use of cocoa in the tobacco industry.
- Sidebar:** A vertical menu of services including: TÜTÜN KONTROLÜ KAMUOYU BİLGİLENDİRMESİ, MULTİMEDYA, BİLGİ EDİNME, SATIŞ BELGESİ SİSTEMİ, SATICI SORGULAMA, SEKTÖREL BİLGİ KİTAPÇIKLARI, RESMİ İSTATİSTİKLER, AVRUPA BİRLİĞİ BİLDİRİM SİSTEMİ, TÜTÜN MAMULLERİ LİSTESİ, BAĞLANTILAR, and RESMİ GAZETE.
- Footer:** Anasayfa, Kurum Hakkında, Tütün ve Alkol Kontrolü Piyasa Düzenlemeleri, Misyon&Vizyon Faaliyet Raporu, İletişim Bilgileri Duyurular, and the TAPDK logo.



## Additives in Dutch Tobacco Products

- Submissions of tobacco additive lists by manufacturers by electronic database EMTOC (Electronic Model Tobacco Control)
- Analysis of 2010 data (70% of submissions, 80% of cigarette brands)





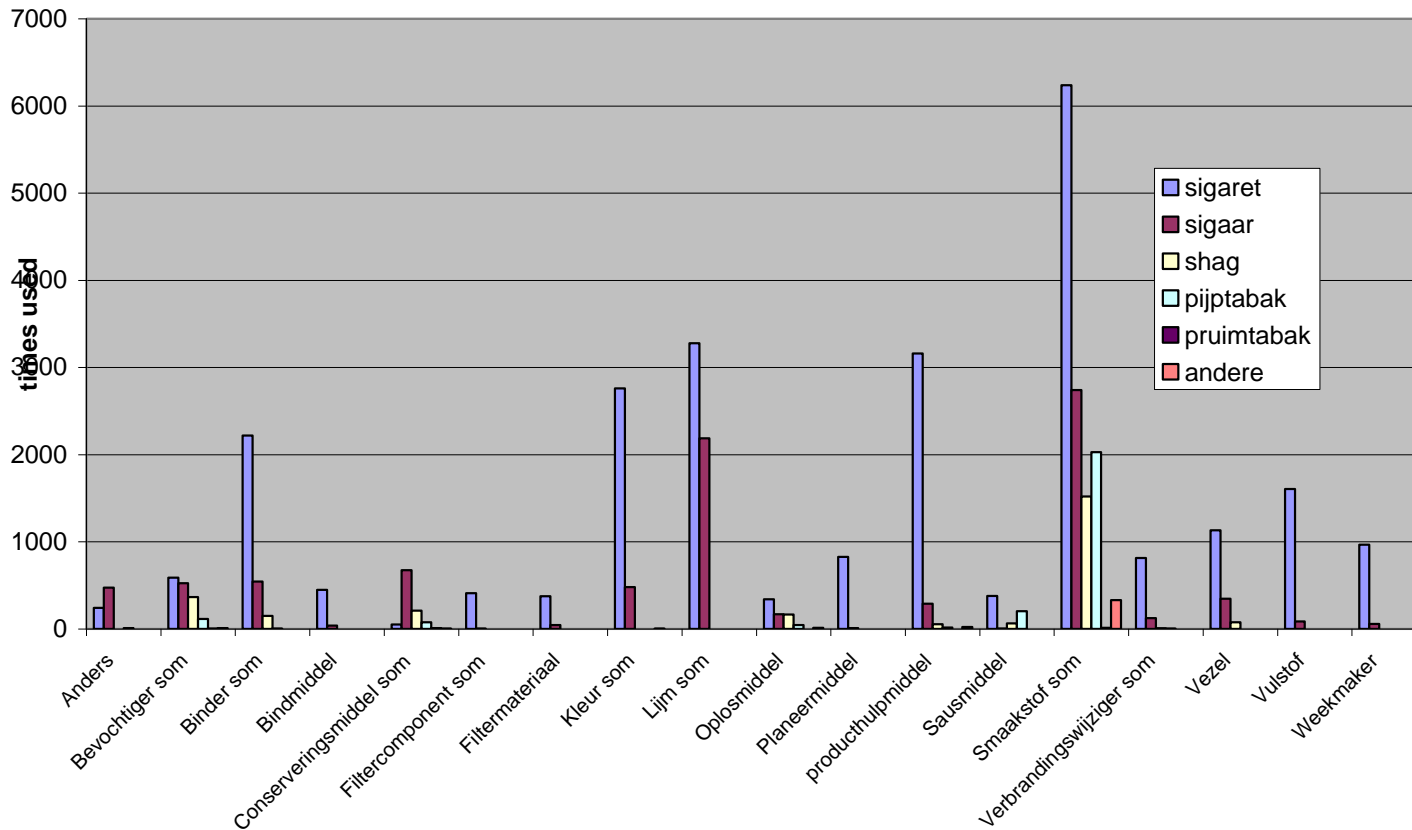
## No. Additives in cigarettes

	<b>No. additives</b>
All brands together	590
less than 10x	294
less than 25x	356
less than 50x	449
less than 75x	504
less than 100x	530
more than 100x	60
over 0.1% weight	83

=> Many additives brand specific? To give own taste?



# Function of additives





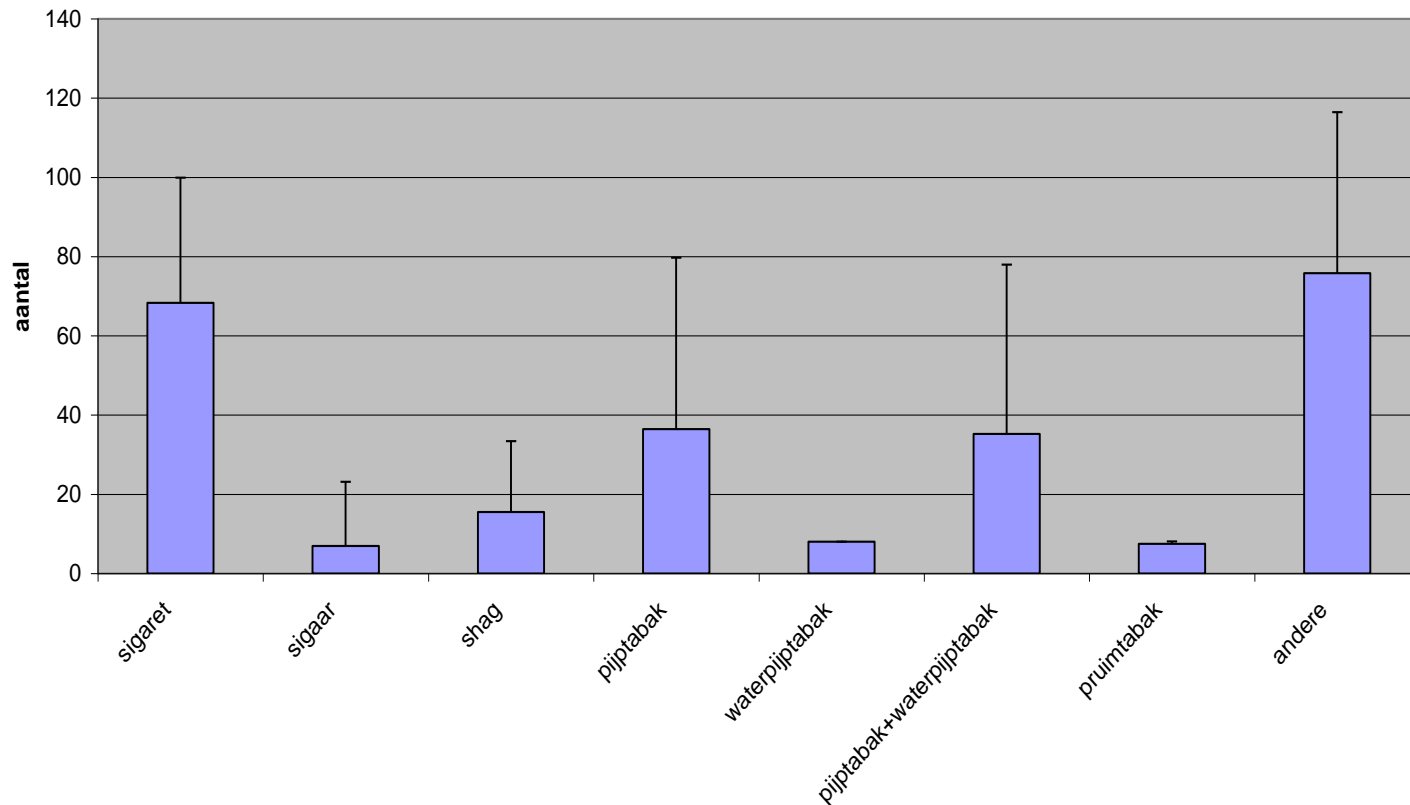
## % flavours per product type

<b>product</b>	<b>of all additives</b>
Cigarette	61% (of 590 different additives)
Cigar	62% (482)
RYO	85% (180)
Pipe tobacco, including waterpipe	97% (362)



# Average no. additives per product type

Cigarette 68 additives (including NTMs)

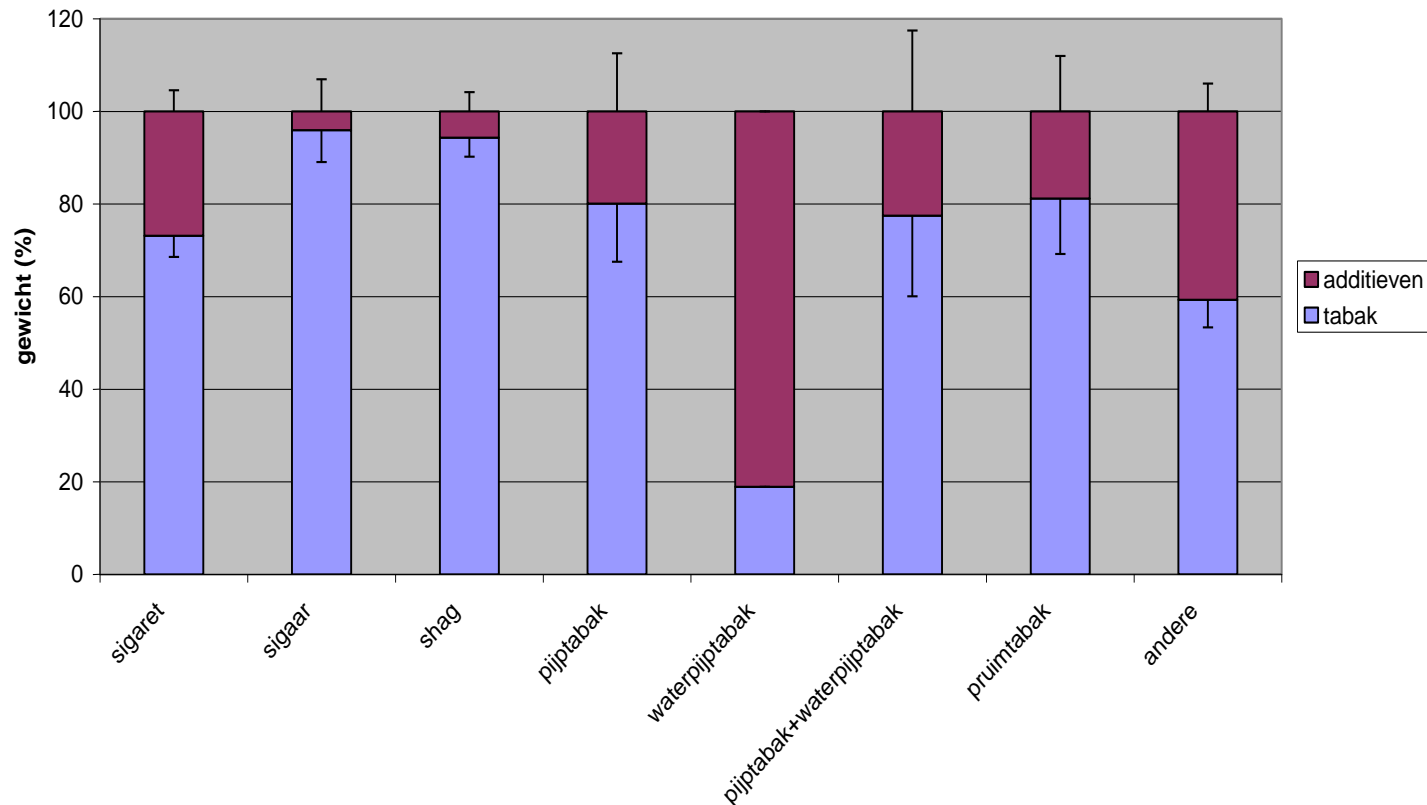






## Average % w/w additives per product type

Cigarette 27% additives (including NTMs)





## Additives in cigarette tobacco

- Average 25, min 0, max 141
- Some brands few additives
  - Often “English” cigarettes, Virginia tobacco
  - ‘fluecured’, many sugars
- Many additives
  - “American blend” Virginia, Burley and Oriental
- Most often added to tobacco:
  - Flavours:
    - > benzaldehyde (147x), almond taste
    - > piperonal (149x), cherry, vanilla taste
    - > vanillin (245x), vanilla taste
  - Humectants:
    - > glycerol (164x)
    - > propylene glycol (248x)



# Top 40s of both frequency and weight %

## Tobacco

- Guar gum (binder)
- Water (humectant)
- Propylene glycol (humectant)
- Glycerol (humectant)
- Cocoa (flavour/casing)
- Different sugars (flavour/casing)

## NTMs

- Calcium carbonate (filler)
- Citrate and salts (burning modifier, also in tobacco)
- Many types of cellulose (fibre, binder)
- Titanium dioxide (colour)
- Ethylene, vinylacetate co-polymer (glue)
- triacetine (plasticizer)
- polyvinylacetate (glue)





## 52% of smoking youths wants additive information

- Which ingredients, also per brand and type
- Effects on health, addiction and flavour
- Why added by tobacco manufacturers





## Careful: health effects particular brands

- e.g. 'light' versus 'regular'
- e.g. additive free cigarettes



- "These cigarettes promote the fact that they do not have all the harmful and artificial chemicals that are so often put into other cigarettes."
- "I would certainly choose these from the shop, purely for the reason that it is clearly promoted that they are cleaner than if you smoked the 'not so natural' cigarettes."

<http://lukeblezard.blogspot.com/2007/08/camel-natural-cigarettes.html>



## Dissemination of additive lists per brand and type

- Germany
  - Belgium
  - Czech republic
  - Netherlands (dec 2012)
- 
- Easy via EMTOC
  - Link to PITOC fact sheets
  - But... How will public understand this info? What will be effect on their perceptions?



# Summary

- PITOC:
  - Info for professionals (English)
  - Info for public (national languages)
- EMTOC:
  - Easy data-analysis
  - Easy dissemination to public



