



ALTADIS GROUP

INGREDIENTS IN TOBACCO PRODUCTS

This document makes disclosure of the ingredients used in the manufacture of the tobacco products produced by the Altadis Group and sold in Portugal in 2006.

It is divided according to the following parts

Part 1 : Cigarettes

- 1.1 Ingredients in tobacco blends
- 1.2 Ingredients in non tobacco materials
- 1.3 Ingredients in tobacco blends brand by brand

Part 2 : Roll-your-own and pipe tobaccos

- 2.1 Ingredients in tobacco blends
- 2.2 Ingredients in tobacco blends brand by brand

Part 3 : Cigars

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- 3.3 Ingredients in tobacco blends brand by brand

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INGREDIENTS IN TOBACCO PRODUCTS

Part 1 : CIGARETTES

1.1 Ingredients in tobacco blends

This list includes all ingredients added to the tobacco blend of the Altadis cigarettes sold in Portugal. Each ingredient is identified by its name, and where available its Chemical Abstract Service Registry number (CAS-N^o), its Flavour and Extracts Manufacturer Association reference number (FEMA), and its Council of Europe reference number (CoE). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of the tobacco blend is given together with a “Function”. The QNE is the maximum amount of the corresponding ingredients, which is used considering all products. The list is arranged in descending order of QNE.

The definitions of the functions are as follows:

Binder: maintains the physical state and texture of the product.

Colour: modifies the colour of a component of a product.

Combustion modifier: influences how the product burns.

Filler: contributes to the bulk of the product without contributing significantly to odour, taste, flavour or aroma.

Flavor: imparts a specific taste, flavor, or aroma to a tobacco product.

Humectant: prevents the product from drying out.

Preservative: protects the product from degradation by micro-organisms.



**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN TOBACCO BLEND**

Country **Portugal**
Year **2006**

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function	
PT	-	-	-	Sugars	4,2	Humectant, Flavor	(1)
PT	-	-	-	Fruits (fresh, dried extracts)	2,4	Flavor	(3)
PT	51-81-5	2525	-	Glycerol	2,0	Humectant	
PT	57-55-6	2940	-	Propyleneglycol	1,8	Humectant	
PT	9004-34-6	-	-	Cellulose	1,6	Binder	
PT	84649-99-0	-	107	Cocoa and Cocoa products	0,9	Flavor	(2)
PT	68916-91-6	2630	-	Licorice (powder and extracts)	0,9	Flavor	
PT	9000-30-0	2537	-	Guar gum	0,3	Binder	
PT	50-70-4	3029	-	Sorbitol	0,3	Humectant	
PT	471-34-1	-	-	Calcium carbonate	0,2	Combustion modifier	
PT	127-08-2	2920	-	Potassium acetate	0,2	Combustion modifier	
PT	866-84-2	-	-	Potassium citrate	0,2	Combustion modifier	
PT	8028-89-5	2235	-	Caramel	0,1	Flavor	
PT	9000-40-2	2243	120	Carob bean extract	0,1	Flavor	
PT	77-92-2	2306	20	Citric acid	0,1	Flavor	
PT	598-82-3	2611	4	Lactic acid	0,1	Flavor	
PT	24634-61-5	-	-	Potassium sorbate	0,1	Preservative	
PT	9000-05-9	2133	439	Benzoin oil	0,01	Flavor	
PT	100-51-6	2137	58	Benzyl alcohol	0,01	Flavor	
PT	120-51-4	2138	262	Benzyl benzoate	0,01	Flavor	
PT	977018-53-3	2486	460	Fenugreek oil	0,01	Flavor	

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function	
PT	977089-65-8	2757	11	Maple extract	0,01	Flavor	
PT	120-57-0	2911	104	Piperonal	0,01	Flavor	
PT	8008-88-6	3100	473	Valerian oil	0,01	Flavor	
PT	121-33-5	3107	107	Vanillin	0,01	Flavor	
PT	120-14-9	3109	106	3,4-Dimethoxybenzaldehyde	0,001	Flavor	
PT	765-70-8	2700	758	3-Methylcyclopentan-1,2-dione	0,001	Flavor	
PT	100-06-1	2005	570	4-Methoxyacetophenone	0,001	Flavor	
PT	123-11-5	2670	103	4-Methoxybenzaldehyde	0,001	Flavor	
PT	92-48-8	2699	579	6-Methylcoumarine	0,001	Flavor	
PT	75-07-0	2003	89	Acetaldehyde	0,001	Flavor	
PT	64-19-7	2006	2	Acetic acid	0,001	Flavor	
PT	302-72-7	3818	-	Alanine	0,001	Flavor	
PT	103-37-7	2140	277	Benzyl butyrate	0,001	Flavor	
PT	14901-07-6	2595	142	beta-Ionone	0,001	Flavor	
PT	8015-90-5	2271	52	Celery seed oil	0,001	Flavor	
PT	103-54-8	2293	208	Cinnamyl acetate	0,001	Flavor	
PT	84650-00-0	-	148	Coffee extract	0,001	Flavor	
PT	141-78-6	2414	191	Ethyl acetate	0,001	Flavor	
PT	121-32-4	2464	108	Ethylvanillin	0,001	Flavor	
PT	695-06-7	2556	2254	Hexano-1,4-lactone	0,001	Flavor	
PT	78-83-1	2179	49	Isobutanol	0,001	Flavor	
PT	123-92-2	2055	214	Isopentyl acetate	0,001	Flavor	
PT	503-74-2	3102	8	Isovaleric acid	0,001	Flavor	
PT	118-71-8	2656	148	Maltol	0,001	Flavor	
PT	103-26-4	2698	333	Methyl cinnamate	0,001	Flavor	
PT	8028-48-6	2821	143	Orange oil	0,001	Flavor	
PT	108-29-2	3103	757	Pentano-1,4-lactone	0,001	Flavor	
PT	150-78-7	2386	2059	1,4-Dimethoxybenzene	0,0001	Flavor	
PT	15707-24-1	3136	534	2,3-Diethylpyrazine	0,0001	Flavor	
PT	5910-89-4	3271	11323	2,3-Dimethylpyrazine	0,0001	Flavor	
PT	24295-03-2	3328	11726	2-Acetylthiazole	0,0001	Flavor	
PT	13925-07-0	3150	727	2-Ethyl-3,5-Dimethylpyrazine	0,0001	Flavor	

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	27043-05-6	3149	727	2-Ethyl-3,6-Dimethylpyrazine	0,0001	Flavor
PT	96-17-3	2691	575	2-Methylbutanal	0,0001	Flavor
PT	60-12-8	2858	68	2-Phenylethan-1-ol	0,0001	Flavor
PT	119-84-6	2381	535	3,4-Dihydrocoumarine	0,0001	Flavor
PT	13494-06-9	3268	2234	3,4-Dimethylcyclopenta-1,2-dione	0,0001	Flavor
PT	13494-07-0	3269	2235	3,5-Dimethylcyclopenta-1,2-dione	0,0001	Flavor
PT	106-21-8	2391	75	3,7-Dimethyl-1-octanol	0,0001	Flavor
PT	590-86-3	2692	94	3-Methylbutanal	0,0001	Flavor
PT	5471-51-2	2588	755	4-(p-Hydroxyphenyl)butan-2-one	0,0001	Flavor
PT	28664-35-9	3634	11834	4,5-Dimethyl-3-hydroxy-2,5-dihydrofuran-2-one	0,0001	Flavor
PT	698-10-2	3153	2300	5-Ethyl-3-hydroxy-4-methyl-2(5H)furanone	0,0001	Flavor
PT	620-02-0	2702	119	5-Methylfurfural	0,0001	Flavor
PT	94-86-0	2922	170	6-Ethoxyprop-3-enylphenol	0,0001	Flavor
PT	98-86-2	2009	138	Acetophenone	0,0001	Flavor
PT	8016-84-0	3040	443	African marigold (tagetes) oil	0,0001	Flavor
PT	127-41-3	2594	141	alpha Ionone	0,0001	Flavor
PT	8007-00-9	2116	298	Balsam Peru oil	0,0001	Flavor
PT	9000-64-0	3070	297	Balsam tolu oil	0,0001	Flavor
PT	100-52-7	2127	101	Benzaldehyde	0,0001	Flavor
PT	119-61-9	2134	166	Benzophenone	0,0001	Flavor
PT	8007-75-8	2153	137	Bergamot oil	0,0001	Flavor
PT	23726-92-3	3243	2340	beta-Damascone	0,0001	Flavor
PT	431-03-8	2370	752	Butan-2,3-dione	0,0001	Flavor
PT	107-92-6	2221	5	Butyric acid	0,0001	Flavor
PT	84961-46-6	2256	131	Cassia Bark oil	0,0001	Flavor
PT	104-55-2	2286	102	Cinnamaldehyde	0,0001	Flavor
PT	8015-96-1	2292	130	Cinnamon leaf oil	0,0001	Flavor
PT	103-59-3	2297	496	Cinnamyl isobutyrate	0,0001	Flavor
PT	5392-40-5	2303	109	Citral	0,0001	Flavor
PT	26489-01-0	2309	59	Citronellol	0,0001	Flavor
PT	105-85-1	2314	345	Citronellyl formate	0,0001	Flavor
PT	8015-97-2	2325	188	Clove leaf oil	0,0001	Flavor

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function	
PT	8016-21-5	2331	-	Cognac oil, green	0,0001	Flavor	
PT	8008-52-4	2334	154	Coriander oil	0,0001	Flavor	
PT	8014-13-9	2343	161	Cumin oil	0,0001	Flavor	
PT	112-31-2	2362	98	Decanal	0,0001	Flavor	
PT	706-14-9	2360	2230	Decano-1,4-lactone	0,0001	Flavor	
PT	713-95-1	2401	624	Dodecano-1,4-lactone	0,0001	Flavor	
PT	7452-79-1	2443	265	Ethyl 2-methylbutyrate	0,0001	Flavor	
PT	105-54-4	2427	264	Ethyl butyrate	0,0001	Flavor	
PT	623-70-1	3486	2244	Ethyl crotonate	0,0001	Flavor	
PT	110-38-3	2432	309	Ethyl decanoate	0,0001	Flavor	
PT	106-33-2	2441	375	Ethyl dodecanoate	0,0001	Flavor	
PT	106-30-9	2437	365	Ethyl heptanoate	0,0001	Flavor	
PT	628-97-7	2451	634	Ethyl hexadecanoate	0,0001	Flavor	
PT	123-66-0	2439	310	Ethyl hexanoate	0,0001	Flavor	
PT	108-64-5	2463	442	Ethyl isovalerate	0,0001	Flavor	
PT	97-64-3	2440	371	Ethyl lactate	0,0001	Flavor	
PT	123-29-5	2447	388	Ethyl nonanoate	0,0001	Flavor	
PT	111-61-5	3490	745	Ethyl octadecanoate	0,0001	Flavor	
PT	106-32-1	2449	392	Ethyl octanoate	0,0001	Flavor	
PT	111-62-6	2450	633	Ethyl oleate	0,0001	Flavor	
PT	101-97-3	2452	2156	Ethyl phenylacetate	0,0001	Flavor	
PT	105-37-3	2456	402	Ethyl propionate	0,0001	Flavor	
PT	124-06-1	2445	385	Ethyl tetradecanoate	0,0001	Flavor	
PT	8023-81-1	2504	436	Genet oil	0,0001	Flavor	
PT	106-24-1	2507	60	Geraniol	0,0001	Flavor	
PT	8000-46-2	-	324	Geranium oil	0,0001	Flavor	
PT	105-87-3	2509	201	Geranyl acetate	0,0001	Flavor	
PT	106-29-6	2512	274	Geranyl butyrate	0,0001	Flavor	
PT	105-90-8	2517	409	Geranyl propionate	0,0001	Flavor	
PT	8016-23-7	2534	97	Guaiac wood oil	0,0001	Flavor	
PT	105-21-5	2539	2253	Heptano-1,4-lactone	0,0001	Flavor	
PT	123-51-3	2057	51	Isopentanol	0,0001	Flavor	

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	659-70-1	2085	458	Isopentyl isovalerate	0,0001	Flavor
PT	102-19-2	2081	2161	Isopentyl phenylacetate	0,0001	Flavor
PT	8008-56-8	2625	139	Lemon oil	0,0001	Flavor
PT	5989-27-5	2633	491	Limonene	0,0001	Flavor
PT	78-70-6	2635	61	Linalool	0,0001	Flavor
PT	8016-31-7	2651	261	Lovage oil	0,0001	Flavor
PT	8008-31-9	2657	142	Mandarine oil	0,0001	Flavor
PT	89-78-1	2665	63	Menthol	0,0001	Flavor
PT	93-08-3	2723	147	Methyl 2-naphthylketone	0,0001	Flavor
PT	85-91-6	2718	756	Methyl N-methylantranilate	0,0001	Flavor
PT	101-41-7	2733	2155	Methyl phenylacetate	0,0001	Flavor
PT	109-08-0	3309	2270	Methylpyrazine	0,0001	Flavor
PT	106-25-2	2770	2018	Nerol	0,0001	Flavor
PT	999-40-6	2774	505	Neryl butyrate	0,0001	Flavor
PT	8008-45-5	2793	296	Nutmeg oil	0,0001	Flavor
PT	104-50-7	2796	2274	Octano-1,4-lactone	0,0001	Flavor
PT	71-41-0	2056	514	Pentan-1-ol	0,0001	Flavor
PT	103-45-7	2857	221	Phenethyl acetate	0,0001	Flavor
PT	94-47-3	2860	667	Phenethyl benzoate	0,0001	Flavor
PT	140-26-1	2871	461	Phenethyl isovalerate	0,0001	Flavor
PT	103-82-2	2878	672	Phenylacetic acid	0,0001	Flavor
PT	8030-97-5	2967	113	Pyroligneous acid extract	0,0001	Flavor
PT	8007-01-0	2989	405	Rose oil	0,0001	Flavor
PT	90-02-8	3004	605	Salicylaldehyde	0,0001	Flavor
PT	8024-01-9	-	265	Styrax oil	0,0001	Flavor
PT	1124-11-4	3237	734	Tetramethylpyrazine	0,0001	Flavor
PT	14667-55-1	3244	735	Trimethylpyrazine	0,0001	Flavor
PT	104-67-6	3091	179	Undecano-1,4-lactone	0,0001	Flavor

(1) Sugars : This ingredient includes white sugar (sucrose; CAS-n° 57-50-1), brown sugars (sucrose), partial or totally invert sugars (glucose; CAS n° 50-99-7, fructose; CAS n° 57-48-7 and sucrose), corn syrups, honeys, and maple sugar (sucrose).

(2) Cocoa and cocoa products : This ingredient includes cocoa powder, cocoa shells powder, and cocoa extracts.

(3) Fruits (fresh, dried extracts) : This ingredient includes juices and extracts of apple, apricot, fig, lemon and plum, but not oils or essential oils thereof.

INGREDIENTS IN TOBACCO PRODUCTS

Part 1 : CIGARETTES

1.2 Ingredients in non tobacco materials

This list includes all ingredients present in the composition of the non tobacco materials used in the Altadis cigarettes sold in Portugal. Each ingredient is identified by its name and where available its Chemical Abstract Service Registry number (CAS-N°). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of total product is given. The QNE is the maximum amount of the corresponding ingredients, which is present considering all products.

The list is subdivided in the following sections

Cigarette papers

Sideseam glues

Monogram inks

Filters / Tipping papers

Filters / Plugwraps

Filters / Filtration materials

Filters / Glues

Each subdivision is arranged in descending order of QNE.

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

CIGARETTE PAPERS			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	9004-34-6	Cellulose	3,6
PT	471-34-1	Calcium carbonate	1,9
PT	9000-30-0	Guar gum	0,1
PT	6100-05-6	Potassium citrate	0,1
PT	6132-04-3	Sodium citrate	0,1
PT	56780-58-6	Starch (cationic)	0,1
PT	65497-29-2	Guar gum (cationic)	0,01
PT	68409-70-1	Polyethylene-polyamine resin	0,01

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

SIDeseam GLUES			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	24937-78-8	Ethylene-vinylacetate copolymer	0,3
PT	9003-20-7	Polyvinyl acetate	0,2
PT	25213-24-1	Polyvinyl alcohol	0,01

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

MONOGRAM INKS			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	63148-69-6	Alkyd resin	0,002
PT	64742-13-8	Mineral oil	0,002
PT	471-34-1	Calcium carbonate	0,001
PT	16521-38-3	Indigotine, pigment	0,001
PT	92202-16-9	Phenol modified rosin	0,001
PT	8001-26-1	Linseed oil	0,0005
PT	8042-47-5	Parafinic oil	0,0005
PT	1333-86-4	Pigment black 7	0,0005
PT	68083-42-1	Pigment blue 1	0,0002
PT	147-14-8	Pigment blue 15:3	0,0002
PT	97952-68-6	Bentone SD-1	0,0001
PT	68153-30-0	Bentonite	0,0001
PT	6535-46-2	Pigment red 112	0,0001
PT	7023-61-2	Pigment red 48:2	0,0001
PT	13463-67-7	Pigment white 6	0,0001
PT	5102-83-0	Pigment yellow 13	0,0001
PT	112945-55-2	Silica	0,0001
PT	12225-21-7	Tartrazine, pigment	0,0001

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

FILTERS / TIPPING PAPERS			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	9004-34-6	Cellulose	3,0
PT	1332-58-7	Kaolin	1,0
PT	471-34-1	Calcium carbonate	0,7
PT	1317-70-0	Titanium dioxide	0,5
PT	21645-51-2	Aluminium hydroxide	0,2
PT	20344-49-4	Iron oxide hydroxide yellow, pigment	0,2
PT	9004-70-0	Nitrocellulose	0,2
PT	9005-25-8	Starch	0,2
PT	65996-62-5	Starch (oxidized)	0,2
PT	14807-96-6	Talc	0,2
PT	77-90-7	Acetyl tributyl citrate	0,1
PT	84989-41-3	Alkylketene dimer	0,1
PT	1327-41-9	Aluminium sulphate	0,1
PT	7440-50-8	Copper, pigment	0,1
PT	102-76-1	Glycerol triacetate	0,1
PT	1309-37-1	Iron oxide red, pigment	0,1
PT	7722-76-1	Monoammonium phosphate	0,1
PT	7558-80-7	Monosodium phosphate	0,1
PT	7758-29-4	Pentasodium triphosphate	0,1
PT	12040-43-6	Silicic acid, aluminium magnesium sodium salt	0,1
PT	56780-58-6	Starch (cationic)	0,1
PT	9045-28-7	Starch (esterified)	0,1
PT	62887-06-3	Acrylic resin	0,01
PT	3844-45-9	Billiant blue FCF, pigment	0,01
PT	1333-86-4	Carbon black (vegetal), pigment	0,01
PT	9000-30-0	Guar gum	0,01
PT	16521-38-3	Indigo blue, pigment	0,01
PT	1317-61-9	Iron oxide black, pigment	0,01
PT	69418-26-4	Polyacrylamide	0,01
PT	25212-19-5	Polyamide polyamine epychlorhydrine resin	0,01
PT	91081-22-0	Rosin	0,01
PT	9005-38-3	Sodium alginate	0,01
PT	29497-08-3	Styrene - acrylate copolymer	0,01
PT	7440-66-6	Zinc,pigment	0,01
PT	12227-78-0	Erythrosine, pigment	0,001
PT	12227-89-3	Pigment Black 11	0,001
PT	12225-21-7	Tartrazine, pigment	0,001

Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	25956-17-6	Allura red, pigment	0,0001
PT	915-67-3	Amaranth, pigment	0,0001
PT	8004-72-0	Quinoline yellow, pigment	0,0001

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

FILTERS / PLUGWRAPS			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	9004-34-6	Cellulose	2,0
PT	9004-32-4	Carboxymethylcellulose	0,1
PT	9000-30-0	Guar gum	0,1
PT	9002-89-5	Polyvinyl alcohol	0,1
PT	56780-58-6	Starch (cationic)	0,1
PT	65996-62-5	Starch (oxidized)	0,1
PT	68442-85-3	Viscose	0,1
PT	98246-87-8	Alkylketene dimere	0,01
PT	107-22-2	Glyoxal	0,01
PT	25212-19-5	Polyamide polyamine epychlorhydrine resin	0,01

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

FILTERS / FILTRATION MATERIAL			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	9004-35-7	Cellulose diacetate	15,0
PT	102-76-1	Glycerol triacetate	1,3
PT	13463-67-7	Titanium dioxide	0,2

**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN NON TOBACCO MATERIALS**



Country **Portugal**
Year **2006**

FILTERS / FILTER GLUES			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigarette)
PT	24937-78-8	Ethylene vinylacetate copolymer	1,2
PT	8002-74-2	Fisher-Tropsch wax	0,1
PT	63231-60-7	Hydrocarbon wax	0,1
PT	88526-47-0	Hydrocarbons resins, hydrogenated	0,1
PT	65997-13-9	Hydrogenated colophony glycerol ester	0,1
PT	69430-35-9	Hydrogenated polycyclopentadiene resin	0,1
PT	64742-51-4	Paraffine	0,1
PT	9003-20-7	Polyvinyl acetate	0,1
PT	25213-24-5	Polyvinyl alcohol	0,1
PT	9011-11-4	Stryrene alpha methyl styrene resin	0,1
PT	73597-48-5	Terpene-phenolic resin	0,1
PT	102-76-1	Glycerol triacetate	0,01
PT	8050-26-8	Pentaerythritol ester of tall oil rosin	0,01
PT	24937-78-8	Polyethylene wax	0,01
PT	110-44-1	Sorbic acid	0,01
PT	128-37-0	2,6-di(1,1-dimethylethyl)-4-methylphenol	0,001
PT	35285-68-8	Sodium ethyl-p-hydroxybenzoate	0,001
PT	35285-39-9	Sodium propyl-p-hydroxybenzoate	0,001

INGREDIENTS IN TOBACCO PRODUCTS

Part 1 : CIGARETTES

1.3 Ingredients in tobacco blends brand by brand

This list gives the ingredients present in the tobacco blend of the Altadis cigarettes sold in Portugal, brand by brand and type by type. Each ingredient is identified by its name and where available its Chemical Abstract Service Registry number (CAS-N°). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of tobacco blend is given together with the function. The QNE is the maximum amount of the corresponding ingredients, which is present in this product. For each product the list is arranged in descending order of QNE.



**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN TOBACCO BLEND**

Product **Ducados Azul**

Country **Portugal**

Year **2006**

Tar	10
Nicotine	0,8
Carbon monoxide	10

CAS-N°	Ingredient	Quantity not exceeded (% of tobacco)	Function
-	None	-----	-



**TOBACCO PRODUCT - CIGARETTE
INGREDIENTS IN TOBACCO BLEND**

Product **Ducados Azul/Branco**

Country **Portugal**

Year **2006**

Tar	8
Nicotine	0,6
Carbon monoxide	9

CAS-N°	Ingredient	Quantity not exceeded (% of tobacco)	Function
-	None	-----	-

INGREDIENTS IN TOBACCO PRODUCTS

Part 2 : ROOL-YOUR-OWN and PIPE TOBACCOS

2.1 Ingredients in tobacco blends

This list includes all ingredients added to the tobacco blend of the Altadis roll-your-own and pipe tobaccos sold in Portugal. Each ingredient is identified by its name, and where available its Chemical Abstract Service Registry number (CAS-N°), its Flavour and Extracts Manufacturer Association reference number (FEMA), and its Council of Europe reference number (CoE). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of tobacco blend is given together with a “Function”. The QNE is the maximum amount of the corresponding ingredients, which is used considering all products. The list is arranged in descending order of QNE.

The definitions of the functions are as follows:

Binder: maintains the physical state and texture of the product.

Colour: modifies the colour of a component of a product.

Combustion modifier: influences how the product burns.

Filler: contributes to the bulk of the product without contributing significantly to odour, taste, flavour or aroma.

Flavor: imparts a specific taste, flavor, or aroma to a tobacco product.

Humectant: prevents the product from drying out.

Preservative: protects the product from degradation by micro-organisms.



**TOBACCO PRODUCT - ROLL-YOUR OWN & PIPE TOBACCO
INGREDIENTS IN TOBACCO BLEND**

Country **Portugal**
Year **2006**

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function	
PT	57-55-6	2940	-	Propyleneglycol	4,9	Humectant	
PT	51-81-5	2525	-	Glycerol	4,8	Humectant	
PT	-	-	-	Sugars	3,0	Humectant, flavor	(1)
PT	-	-	-	Rum	0,2	Flavor	
PT	121-33-5	3107	107	Vanillin	0,2	Flavor	
PT	9000-40-2	2243	120	Carob bean extract	0,1	Flavor	
PT	84650-00-0	-	148	Coffee extract	0,1	Flavor	
PT	50-70-4	3029	-	Sorbitol	0,1	Humectant	
PT	150-78-7	2386	2059	1,4-Dimethoxybenzene	0,01	Flavor	
PT	119-84-6	2381	535	3,4-Dihydrocoumarine	0,01	Flavor	
PT	765-70-8	2700	758	3-Methylcyclopentan-1,2-dione	0,01	Flavor	
PT	17369-59-4	2952	494	3-Propylideneftalide	0,01	Flavor	
PT	123-11-5	2670	103	4-Methoxybenzaldehyde	0,01	Flavor	
PT	104-87-0	3068	115	4-Methylbenzaldehyde	0,01	Flavor	
PT	98-86-2	2009	138	Acetophenone	0,01	Flavor	
PT	120-51-4	2138	262	Benzyl benzoate	0,01	Flavor	
PT	8028-89-5	2235	-	Caramel	0,01	Flavor	
PT	141-78-6	2414	191	Ethyl acetate	0,01	Flavor	
PT	101-97-3	2452	2156	Ethyl phenylacetate	0,01	Flavor	
PT	977018-53-3	2486	460	Fenugreek oil	0,01	Flavor	
PT	94-46-2	2058	562	Isopentyl benzoate	0,01	Flavor	
PT	78-70-6	2635	61	Linalool	0,01	Flavor	

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function	
PT	103-82-2	2878	672	Phenylacetic acid	0,01	Flavor	
PT	120-57-0	2911	104	Piperonal	0,01	Flavor	
PT	24634-61-5	-	-	Potassium sorbate	0,01	Preservative	
PT	35285-69-9	-	-	Propyl p-hydroxybenzoate, sodium salt	0,01	Preservative	
PT	90-02-8	304	605	Salicylaldehyde	0,01	Flavor	
PT	98-85-1	2685	2030	1-Phenylethan-1-ol	0,001	Flavor	
PT	122-02-9	2677	156	4-Methylacetophenone	0,001	Flavor	
PT	64-19-7	2006	2	Acetic acid	0,001	Flavor	
PT	977136-92-7	2117	298	Balsam Peru oil	0,001	Flavor	
PT	65-85-0	2131	-	Benzoic acid	0,001	Flavor	
PT	621-82-9	2288	22	Cinnamic acid	0,001	Flavor	
PT	121-32-4	2464	108	Ethylvanillin	0,001	Flavor	
PT	8016-23-7	2534	97	Guaiac wood oil	0,001	Flavor	
PT	104-50-7	2796	2274	Octano-1,4-lactone	0,001	Flavor	
PT	8024-01-9	-	265	Styrax oil	0,001	Flavor	
PT	60-12-8	2858	68	2-Phenylethan-1-ol	0,0001	Flavor	
PT	3658-77-3	3174	536	4-Hydroxy-2,5-dimethyl-3(2H)-furanone	0,0001	Flavor	
PT	137-00-8	3204	11621	5-(2-Hydroxyethyl)-4-methylthiazole	0,0001	Flavor	
PT	620-02-0	2702	119	5-Methylfurfural	0,0001	Flavor	
PT	4180-23-8	2086	123	Anethole	0,0001	Flavor	
PT	8007-70-3	2094	336	Anise oil	0,0001	Flavor	
PT	8012-89-3	-	1	Beeswax oil	0,0001	Flavor	
PT	100-52-7	2127	101	Benzaldehyde	0,0001	Flavor	
PT	140-11-4	2135	204	Benzyl acetate	0,0001	Flavor	
PT	8015-88-1	2244	173	Carrot seed oil	0,0001	Flavor	
PT	8015-90-5	2271	52	Celery seed oil	0,0001	Flavor	
PT	104-55-2	2286	102	Cinnamaldehyde	0,0001	Flavor	
PT	97-53-0	2467	171	Eugenol	0,0001	Flavor	
PT	4602-84-0	2478	78	Farnesol	0,0001	Flavor	
PT	99-85-4	3559	11025	gamma-Terpinene	0,0001	Flavor	
PT	105-87-3	2509	201	Geranyl acetate	0,0001	Flavor	

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	90045-56-0	2592	225	Helychrysum (immortelle) oil	0,0001	Flavor
PT	120-72-9	2593	560	Indole	0,0001	Flavor
PT	68916-91-6	2630	-	Licorice (Powder and extract)	0,0001	Flavor
PT	115-95-7	2636	203	Linalyl acetate	0,0001	Flavor
PT	8016-31-7	2651	261	Lovage oil	0,0001	Flavor
PT	118-71-8	2656	148	Maltol	0,0001	Flavor
PT	134-20-3	2682	250	Methyl anthranilate	0,0001	Flavor
PT	7212-44-4	2772	67	Nerolidol	0,0001	Flavor
PT	141-12-8	2773	2061	Neryl acetate	0,0001	Flavor
PT	977049-65-2	2818	143	Orange blossom oil	0,0001	Flavor
PT	8008-57-9	2825	143	Orange oil	0,0001	Flavor
PT	600-14-6	2841	2039	Pentan-2,3-dione	0,0001	Flavor
PT	8014-17-3	2855	138	Petitgrain oil	0,0001	Flavor
PT	8030-97-5	2967	113	Pyroligneous acid extract	0,0001	Flavor
PT	1124-11-4	3237	734	Tetramethylpyrazine	0,0001	Flavor

(1) Sugars : This ingredient includes white sugar (sucrose; CAS-n° 57-50-1), brown sugars (sucrose), partial or totally invert sugars (glucose; CAS n° 50-99-7, fructose; CAS n° 57-48-7 and sucrose), corn syrups, honeys, and maple sugar (sucrose).

INGREDIENTS IN TOBACCO PRODUCTS

Part 2 : ROOL-YOUR-OWN and PIPE TOBACCOS

2.2 Ingredients in tobacco blends brand by brand

This list gives the ingredients present in the tobacco blend of the Altadis roll-your-own and pipe tobaccos sold in Portugal, brand by brand and type by type. Each ingredient is identified by its name and where available its Chemical Abstract Service Registry number (CAS-N°). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of tobacco blend is given together with the function. The QNE is the maximum amount of the corresponding ingredients, which is present in this product. For each product the list is arranged in descending order of QNE.

INGREDIENTS IN TOBACCO PRODUCTS

Part 3 : CIGARS

3.1 Ingredients in tobacco blends

This list includes all ingredients added to the tobacco blend of the Altadis cigars sold in Portugal. Each ingredient is identified by its name, and where available its Chemical Abstract Service Registry number (CAS-N°), its Flavour and Extracts Manufacturer Association reference number (FEMA), and its Council of Europe reference number (CoE). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of total product is given together with a “Function”. The QNE is the maximum amount of the corresponding ingredients, which is used considering all products. The list is arranged in descending order of QNE.

The definitions of the functions are as follows:

Binder: maintains the physical state and texture of the product.

Colour: modifies the colour of a component of a product.

Combustion modifier: influences how the product burns.

Filler: contributes to the bulk of the product without contributing significantly to odour, taste, flavour or aroma.

Flavor: imparts a specific taste, flavor, or aroma to a tobacco product.

Humectant: prevents the product from drying out.

Preservative: protects the product from degradation by micro-organisms.



**TOBACCO PRODUCT - CIGAR
INGREDIENTS IN TOBACCO BLEND**

Country **Portugal**
Year **2006**

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	9004-67-5	-	-	Methyl cellulose	3,5	Binder
PT	9004-34-6	-	-	Cellulose	2,7	Binder
PT	57-55-6	2940	-	Propyleneglycol	2,5	Humectant
PT	100-51-6	2137	58	Benzyl alcohol	2,4	Flavor
PT	121-32-4	2464	108	Ethylvanillin	1,7	Flavor
PT	121-33-5	3107	107	Vanillin	1,0	Flavor
PT	64-17-5	2419	4091	Ethanol	0,9	Flavor
PT	123-92-2	2055	214	Isopentyl acetate	0,9	Flavor
PT	79-09-4	2924	3	Propionic acid	0,7	Flavor
PT	12619-70-4	-	-	beta-Cyclodextrin	0,4	Binder
PT	105-54-4	2427	264	Ethyl butyrate	0,4	Flavor
PT	25415-62-7	-	2224	Pentyl isovalerate	0,3	Flavor
PT	128-44-9	2997	-	Sodium saccharin	0,3	Flavor
PT	765-70-8	2700	758	3-Methylcyclopentan-1,2-dione	0,2	Flavor
PT	5471-51-2	2588	755	4-(p-Hydroxyphenyl)butan-2-one	0,2	Flavor
PT	84649-99-0	-	-	Cocoa extract	0,2	Flavor
PT	106-27-4	2060	282	Isopentyl butyrate	0,2	Flavor
PT	10326-41-7	2611	4	Lactic acid	0,2	Flavor
PT	103-82-2	2878	672	Phenylacetic acid	0,2	Flavor
PT	120-57-0	2911	104	Piperonal	0,2	Flavor
PT	109-60-4	2925	192	Propyl acetate	0,2	Flavor
PT	110-44-1	3921	-	2,4-Hexadienoic acid	0,1	Binder
PT	15707-23-0	3155	548	2-Ethyl-3-Methylpyrazine	0,1	Flavor
PT	60-12-8	2858	68	2-Phenylethan-1-ol	0,1	Flavor
PT	119-84-6	2381	535	3,4-Dihydrocoumarin	0,1	Flavor

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	120-14-9	3109	106	3,4-Dimethoxybenzaldehyde	0,1	Flavor
PT	513-86-0	2008	749	3-Hydroxybutan-2-one	0,1	Flavor
PT	3658-77-3	3174	536	4-Hydroxy-2,5-dimethylfuran-3(2H)-one	0,1	Flavor
PT	4077-47-8	3664	-	4-Methoxy-2,5-dimethylfuran-3(2H)-one	0,1	Flavor
PT	123-11-5	2670	103	4-Methoxybenzaldehyde	0,1	Flavor
PT	64-19-7	2006	2	Acetic acid	0,1	Flavor
PT	8007-00-9	2117	298	Balsam Peru oil	0,1	Flavor
PT	9000-72-0	-	-	Benzoin oil	0,1	Flavor
PT	120-51-4	2138	262	Benzyl benzoate	0,1	Flavor
PT	23696-87-7	3420	11197	beta-Damascenone	0,1	Flavor
PT	23726-92-3	3243	2340	beta-Damascone	0,1	Flavor
PT	431-03-8	2370	752	Butan-2,3-dione	0,1	Flavor
PT	8028-89-5	2235	-	Caramel	0,1	Flavor
PT	9000-40-2	2648	120	Carob bean extract	0,1	Flavor
PT	104-54-1	2294	65	Cinnamyl alcohol	0,1	Flavor
PT	122-69-0	2298	332	Cinnamyl cinnamate	0,1	Flavor
PT	928-96-1	2563	750	cis 3-Hexenol	0,1	Flavor
PT	3681-71-8	3171	644	cis 3-Hexenyl acetate	0,1	Flavor
PT	33467-74-2	-	-	cis-3-Hexenyl propionate	0,1	Flavor
PT	03/03/8016	2359	69	Davana oil	0,1	Flavor
PT	706-14-9	2360	2230	Decano-1,4-lactone	0,1	Flavor
PT	705-86-2	2361	621	Decano-1,5-lactone	0,1	Flavor
PT	50-99-7			Dextrose	0,1	Binder
PT	75-18-3	2746	483	Dimethyl sulfide	0,1	Flavor
PT	713-95-1	2401	624	Dodecano-1,5-lactone	0,1	Flavor
PT	141-78-6	2414	191	Ethyl acetate	0,1	Flavor
PT	539-88-8	2442	373	Ethyl levulinate	0,1	Flavor
PT	105-37-3	2456	402	Ethyl propionate	0,1	Flavor
PT	4940-11-8	3487	692	Ethylmaltol	0,1	Flavor
PT	84625-40-1	2485	460	Fenugreek oil	0,1	Flavor
PT	-	-	-	Fruits (fresh, dried extract)	0,1	Flavor
PT	98-01-1	2489	2014	Furfural	0,1	Flavor
PT	56-81-5	2525	4117	Glycerol	0,1	Humectant
PT	105-21-5	2539	2253	Heptano-1,4-lactone	0,1	Flavor
PT	142-92-7	2565	196	Hexyl acetate	0,1	Flavor

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	1415-93-6	-	-	Humic acid	0,1	Colour
PT	1365-19-1	3746	2214	Linalool oxide	0,1	Flavor
PT	-	-	-	Malt extract	0,1	Flavor
PT	65416-14-0	3462	1073	Maltyl isobutyrate	0,1	Flavor
PT	111-12-6	2729	481	Methyl 2-octynoate	0,1	Flavor
PT	2882-20-4	3208	2290	Methylmethoxypyrazines	0,1	Flavor
PT	-	-	-	Molasses extract	0,1	Flavor
PT	104-61-0	2781	178	Nonano-1,4-lactone	0,1	Flavor
PT	104-50-7	2796	2274	Octano-1,4-lactone	0,1	Flavor
PT	24817-51-4	3632	-	Phenethyl 2-methylbutyrate	0,1	Flavor
PT	29895-73-6	2877	41	Phenylacetaldehyde glyceryl acetal	0,1	Flavor
PT	590-00-1	2921	-	Potassium sorbate	0,1	Preservative
PT	-	-	-	Praline caramel extract	0,1	Flavor
PT	127-17-3	2970	19	Pyruvic acid	0,1	Flavor
PT	50-70-4	3029	81	Sorbitol	0,1	Humectant
PT	133-37-9	3044	18	Tartaric acid	0,1	Binder
PT	84650-60-2	-	-	Tea oil	0,1	Flavor
PT	2497-18-9	2564	643	trans-2-Hexenyl acetate	0,1	Flavor
PT	112-27-6	-	-	Triethyleneglycol	0,1	Humectant
PT	-	-	-	Vegetable oil	0,1	Flavor
PT	107-88-0	-	-	1,3-Butyleneglycol	0,01	Humectant
PT	104-20-1	2672	163	4-(4-Methoxyphenyl)butan-2-one	0,01	Flavor
PT	100-52-7	2127	101	Benzaldehyde	0,01	Flavor
PT	14901-07-6	-	-	beta-Ionone	0,01	Flavor
PT	141-97-9	2415	240	Ethyl acetoacetate	0,01	Flavor
PT	106-30-9	2437	365	Ethyl octanoate	0,01	Flavor
PT	503-74-2	3102	8	Isovaleric acid	0,01	Flavor
PT	61-90-5	3297	4150	Leucine	0,01	Flavor
PT	56-87-1	3847	1194	Lysine	0,01	Flavor
PT	118-71-8	2656	148	Maltol	0,01	Flavor
PT	2623-23-6	-	-	Menthyl acetate	0,01	Flavor
PT	3268-49-3	2747	125	Methional	0,01	Flavor
PT	63-91-2	3585	4205	Phenylalanine	0,01	Flavor
PT	147-85-3	3319	4211	Proline	0,01	Flavor
PT	8007-70-3	2096	238	Star anise oil	0,01	Flavor

Member state	CAS-N°	FEMA	CoE	Ingredient	Quantity not exceeded (% of tobacco)	Function
PT	72-19-5	-	-	Threonine	0,01	Flavor
PT	6728-26-3	2560	748	trans 2-Hexenal	0,01	Flavor
PT	8024-06-4	3105	474	Vanilla, crystalline powder	0,01	Flavor
PT	93-92-5	2684	573	1-Phenethyl acetate	0,001	Flavor
PT	13708-12-8	3202	2271	5-Methylquinoxaline	0,001	Flavor
PT	8016-84-01	3040	443	African marigold (tagetes) oil	0,001	Flavor
PT	127-41-3	2594	141	alpha-Ionone	0,001	Flavor
PT	127-51-5	2714	169	alpha-Isomethyl ionone	0,001	Flavor
PT	9000-64-0	3070	297	Balsam tolu oil	0,001	Flavor
PT	140-11-4	2135	204	Benzyl acetate	0,001	Flavor
PT	104-55-2	2286	102	Cinamaldehyde	0,001	Flavor
PT	5329-40-5	-	-	Citral	0,001	Flavor
PT	77-92-9	2306	20	Citric acid	0,001	Binder
PT	8000-46-2	2508	324	Geranium oil	0,001	Flavor
PT	10032-02-7	2515	317	Geranyl hexanoate	0,001	Flavor
PT	3796-70-1	3542	4083	Geranylacetone	0,001	Flavor
PT	9000-30-0	2537	106	Guar gum	0,001	Binder
PT	7647-01-0	-	-	Hydrochloric acid	0,001	Binder
PT	590-86-3	2692	94	Isovaleraldehyde	0,001	Flavor
PT	8000-28-0	-	-	Lavender oil	0,001	Flavor
PT	115-95-7	2636	203	Linalyl acetate	0,001	Flavor
PT	7664-38-2	-	-	Phosphoric acid	0,001	Flavor
PT	89997-56-8	2914	124	Pipsissewa leaf oil	0,001	Flavor
PT	79-09-4	2924	3	Propionic acid	0,001	Flavor
PT	532-32-1	3025	-	Sodium benzoate	0,001	Preservative
PT	8046-19-3	-	-	Styrax oil	0,001	Flavor
PT	14667-55-1	3244	735	Trimethylpyrazine	0,001	Flavor
PT	122-48-5	3124	139	Zingerone	0,001	Flavor
PT	103-41-3	2142	331	Benzyl cinnamate	0,0001	Flavor
PT	107-92-6	2221	5	Butyric acid	0,0001	Flavor
PT	621-82-9	2288	22	Cinnamic acid	0,0001	Flavor
PT	7212-44-4	2772	67	Nerolidol	0,0001	Flavor

INGREDIENTS IN TOBACCO PRODUCTS

Part 3 : CIGARS

3.2 Ingredients in non tobacco materials

This list includes all ingredients present in the composition of the non tobacco materials used in the Altadis cigars sold in Portugal. Each ingredient is identified by its name and where available its Chemical Abstract Service Registry number (CAS-N^o). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of total product is given. The QNE is the maximum amount of the corresponding ingredients, which is present considering all products.

The list is subdivided in the following sections

Cigar glues

Filters / Filtration materials

Filters / Glues

Filters / Plugwraps

Filters / Tipping papers

Each subdivision is arranged in descending order of QNE.

**TOBACCO PRODUCT - CIGAR
INGREDIENTS IN NON TOBACCO MATERIAL**



Country **Portugal**
Year **2006**

CIGAR GLUES			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigar)
PT	9004-32-4	Carboxymethylcellulose	1,0
PT	24937-78-8	Ethylene-vinylacetate copolymer	0,7
PT	9004-67-5	Methyl cellulose	0,5
PT	9004-65-3	Hydroxypropyl methylcellulose	0,4
PT	9004-58-4	Ethyl hydroxyethyl cellulose	0,3
PT	-	Hydroxyethyl cellulose	0,2
PT	67-63-0	Isopropyl alcohol	0,2
PT	05/01/9000	Arabic gum	0,1
PT	9000-40-2	Carob bean gum	0,1
PT	9000-30-0	Guar gum	0,1
PT	99-76-3	Methyl p-hydroxybenzoate	0,1
PT	9002-89-5	Polyvinyl alcohol	0,1
PT	7647-14-5	Sodium chloride	0,1
PT	8028-89-5	Caramel	0,01
PT	590-00-1	Potassium sorbate	0,01
PT	94-13-3	Propyl p-hydroxybenzoate	0,01
PT	9005-37-2	Propyleneglycol alginate	0,01
PT	-	Sodium glycolate	0,01
PT	11138-66-2	Xanthan gum	0,01
PT	8028-89-5	Caramel	0,001
PT	67-64-1	Acetone	0,0001

**TOBACCO PRODUCT - CIGAR
INGREDIENTS IN NON TOBACCO MATERIAL**



Country **Portugal**

Year **2006**

FILTERS / FILTRATION MATERIALS

Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigar)
PT	9004-35-7	Cellulose diacetate	14,6
PT	7440-44-0	Active carbon	3,7
PT	102-76-1	Glyceryl triacetate (Triacetin)	1,5
PT	13463-67-7	Titanium dioxide	0,2

**TOBACCO PRODUCT - CIGAR
INGREDIENTS IN NON TOBACCO MATERIAL**



Country **Portugal**
Year **2006**

FILTERS / GLUES			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigar)
PT	24937-78-8	Ethylene-vinylacetate copolymer	0,1
PT	69430-35-9	Hydrogenated polycyclopentadiene resin	0,1
PT	8000-74-2	Paraffin	0,1
PT	9001-11-4	Styrene-alpha-methylstyrene resin	0,1
PT	9002-89-5	Polyvinyl alcohol	0,001

**TOBACCO PRODUCT - CIGAR
INGREDIENTS IN NON TOBACCO MATERIAL**



Country **Portugal**
Year **2006**

FILTERS / PLUGWRAPS			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigar)
PT	9004-34-6	Cellulose	0,8
PT	68442-85-4	Viscose	0,2
PT	471-34-1	Calcium carbonate	0,1
PT	9002-89-5	Polyvinyl alcohol	0,1

**TOBACCO PRODUCT - CIGAR
INGREDIENTS IN NON TOBACCO MATERIAL**



Country **Portugal**
Year **2006**

FILTERS / TIPPING PAPERS			
Member state	CAS-N°	Ingredient	Quantity not exceeded (% cigar)
PT	9004-34-6	Cellulose	1,5
PT	25212-19-5	Polyamide, polyamine epichlorhydrin resin	0,1
PT	7647-14-5	Sodium chloride	0,1
PT	84989-41-3	Alkylketene dimer	0,01
PT	1325-37-7	C.I. Direct yellow 11 (s), pigment	0,01
PT	111-42-2	Diethanolamide	0,01
PT	57-55-6	Propyleneglycol	0,01
PT	102-71-6	Triethanolamine	0,01
PT	53-13-6	Urea	0,01
PT	556-63-8	Lithium formate	0,001

INGREDIENTS IN TOBACCO PRODUCTS

Part 3 : CIGARS

3.3 Ingredients in tobacco blends brand by brand

This list gives the ingredients present in the tobacco blend of the Altadis cigars sold in Portugal, brand by brand and type by type. Each ingredient is identified by its name and where available its Chemical Abstract Service Registry number (CAS-N°). For each ingredients, a “Quantity not exceeded” (QNE), expressed in % of total product is given together with the function. The QNE is the maximum amount of the corresponding ingredients, which is present in this product. For each product the list is arranged in descending order of QNE.



TOBACCO PRODUCT - CIGAR INGREDIENTS IN TOBACCO BLEND

Product **All Natural Brands with only cigar glue appearing in list
"TOBACCO PRODUCT - CIGAR: INGREDIENTS IN NON TOBACCO
MATERIALS"**

Country **Portugal**

Year **2006**

**Fleur de Savane Corona 5
Fleur de Savane Wilde Cigare 5
Fleur de Savane Wilde Cigare 30
Fleur de Savane Wilde Cigarillos 20
Fleur de Savane Petit Cigare "100% Tabac" 20
Longchamp Corona Tube 2
Longchamp Corona Tube 5
Longchamp Medium 5
Longchamp Mini 20
Pleiades Mini Cigares 20
VegaFina Cervantes 25
VegaFina Corona 25
VegaFina Corona 4
VegaFina Corona Tubo 10
VegaFina Coronitas 25
VegaFina Coronitas 4
VegaFina Elite Caja selección 5
VegaFina Elite Embajadores 25
VegaFina Elite Embajadores 4
VegaFina Elite Gobernadores 25
VegaFina Elite Gobernadores 4
VegaFina Elite Majestades 10
VegaFina Elite Presidentes 10
VegaFina Elite Senadores 10
VegaFina Minutos 25
VegaFina Perla 25
VegaFina Perla 4
VegaFina Pirámide 25
VegaFina Prominente 25
VegaFina Robusto 25**

INGREDIENTS IN TOBACCO PRODUCTS

Part 4 : TOXICOLOGICAL DATA

Tables I and II present a summary of toxicological data obtained through a literature survey. This survey is certainly not exhaustive and not intended to be exhaustive. The most relevant data concerning ingredients in the context of tobacco products are included.

Table I : Toxicological data available in the literature concerning non flavouring substances in burnt and unbunrt form

This table gives for all the non flavouring substances used in Altadis products the following information:

1) Summary of the studies availability in the Scientific Literature for this substance in burnt form according to the following review :

T. Pashke, G. Schrerer, W.D. Heller : Effect of ingredients on cigarette smoke composition and biological activity – A literature overview. Beiträge zur Tabakforschung International (1), 20 (2002) 107-247.

It includes chemical studies on heat degradation products and transfer into smoke, pyrolysis studies, and studies on biological activity.

2) If the compound has been tested in Altadis toxicological studies.

TABLE I : Toxicological data available in the literature concerning non flavouring ingredients

Country

Portugal

Ingredient	Function	Smoke studies litterature survey occurrence (Re BzT)			Tested in Altadis studies
		Chemical studies	Pyrolysis studies	Biological studies	
1,3-Butyleneglycol	Humectant				
2,4-Hexadienoic acid	Binder				
beta-Cyclodextrin	Binder				
Calcium carbonate	Combustion modifier	Y		Y	
Cellulose	Binder	Y	Y	Y	
Dextrose	Binder				
Glycerol	Humectant	Y	Y	Y	Y
Guar gum	Binder	Y	Y		
Humic acid	Colorant				
Methyl cellulose	Binder	Y	Y	Y	
Potassium acetate	Combustion modifier	Y			
Potassium citrate	Combustion modifier	Y			
Potassium sorbate	Preservative	Y	Y	Y	
Propyl p-hydroxybenzoate, sodium salt	Preservative	Y		Y	
Propylenglycol	Humectant	Y	Y	Y	Y
Sodium benzoate	Preservative	Y	Y	Y	
Sorbitol	Humectant	Y	Y		
Sugars	Humectant, flavor	Y	Y	Y	Y
Triethyleneglycol	Humectant	Y	Y		

Table II : Toxicological data available in the literature concerning flavouring substances in burnt and unburnt form

This table gives for all the flavouring substances used in Altadis products the following information :

- 1) Presence of the substance on the Council of Europe lists (Y = Yes; N = No)
- 2) Classification of the substance by the Committee of Experts of the Council of Europe for chemically-defined compounds
 - A : Flavouring substances which may be used as foodstuffs (sufficient data available)
 - B : Flavouring substances for which further information is required before the Committee of Expert is able to offer a firm opinion on their safety-in-use. These substances can be used provisionally in foodstuffs

Source : Chemically-defined flavouring substances, Council of Europe Publishing, Stasbourg; November 2000.

- 3) Classification of the Substance by the Committee of Experts of the Council of Europe for substances of natural origin.
 - N1, N2 and N3 : acceptable natural sources of flavouring
 - N4 : natural source of flavouring used at present but with insufficient information to be classed in categories N1, N2 and N3.

Source : Flavouring substances and natural sources of flavourings 3rd Edition, Edited by Council of Europe, Maisonneuve 1981.

- 4) Evaluation of the substance by the evaluation procedure of the American Flavor and Extract Manufacturer's Association (FEMA), when available. GRAS stands for "Generally Recognised as Safe".
- 5) Summary of the evaluation of the substance by the Joint FAO-WHO Expert Committee on Food Additives (JEFCA), when available. An Acceptable Daily Intake (ADI) is sometimes specified.
- 6) Summary of the studies availability in the Scientific Literature for this substance in burnt form according to the following review :
 - T. Pashke, G. Schrerer, W.D. Heller : Effect of ingredients on cigarette smoke composition and biological activity – A literature overview. Beiträge zur Tabakforschung International (1), 20 (2002) 107-247.
It includes chemical studies on heat degradation products and transfer into smoke, pyrolysis studies, and studies on biological activity.
Several studies have been published on testing biological activities of flavor ingredients in burnt form and particularly:

- Gaworski et al. : Inhal. Toxicol., 10 (1998) 357-381
- Gaworski et al : Toxicology, 139 (1999a) 1-17
- Carmines : Food Chem. Toxicol. 40 (2002) 77-91
- Rustemeier et al : Food Chem. Toxicol. 40 (2002) 93-104
- Römer et al : Food Chem. Toxicol. 40 (2002) 105-111
- Vanscheeuwijk et al : Food Chem. Toxicol. 40 (2002) 113-131

7) If the compound has been tested in Altadis toxicological studies.

TABLE II : Toxicological data available in the literature concerning flavouring ingredients

Country

Portugal

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JEFCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
1,4-Dimethoxybenzene	Y	A		GRAS		Y		Y	Y
1-Phenethyl acetate	Y	A							
1-Phenylethan-1-ol	Y			GRAS					
2,3-Diethylpyrazine	Y	B		GRAS	Acceptable	Y		Y	
2,3-Dimethylpyrazine	Y			GRAS				Y	
2-Acetylthiazole	Y			GRAS					
2-Ethyl-3,5-Dimethylpyrazine	Y	B		GRAS				Y	
2-Ethyl-3,6-Dimethylpyrazine	Y	B		GRAS	Acceptable	Y		Y	
2-Ethyl-3-methylpyrazine	Y	B		GRAS		Y		Y	
2-Methylbutanal	Y	A		GRAS	Acceptable				
2-Phenylethan-1-ol	Y	B		GRAS		Y		Y	Y
3,4-Dihydrocoumarine	Y	A		GRAS	No ADI allocated				Y
3,4-Dimethoxybenzaldehyde									
3,4-Dimethylcyclopentane-1,2-dione	Y	B		GRAS	Acceptable			Y	
3,5-Dimethylcyclopentane-1,2-dione	Y	B		GRAS	Acceptable			Y	
3,7-Dimethyl-octanol	Y	B		GRAS	Acceptable				
3-Hydroxybutan-2-one	Y	A		GRAS	Acceptable	Y		Y	
3-Methylbutanal	Y	A		GRAS	Acceptable	Y		Y	
3-Methylcyclopentan-1,2-dione	Y	A		GRAS	Acceptable	Y		Y	Y
3-Propylidenephtalide	Y	B		GRAS		Y		Y	
4-(p-hydroxyphenyl)-2-butanone	Y	A		GRAS	Acceptable	Y		Y	Y
4-(p-Methoxyphenyl)-2-butanone	Y	A		GRAS					
4,5-Dimethyl-3-hydroxy-2,5-dihydrofuran-2-one	N							Y	
4-Hydroxy-2,5-dimethylfuran-3(2H)one	Y	B		GRAS				Y	

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JEFCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
4-Methoxy-2,5-dimethylfuran-3(2H)-one	N			GRAS					
4-Methoxyacetophenone	Y	B		GRAS	Acceptable	Y		Y	
4-Methoxybenzaldehyde	Y	A		GRAS	Acceptable	Y		Y	
4-Methylacetophenone	Y	B		GRAS		Y		Y	
5-(2-Hydroxyethyl)-4-methylthiazole	Y								
5-Ethyl-3-hydroxy-4-methyl-2(5H)furanone	Y	B		GRAS	Acceptable	Y		Y	
5-Methylfurfural	Y	B		GRAS	ADI : 0-0,5 mg/kg				Y
5-Methylquinoxaline	Y			GRAS					
6-Ethoxyprop-3-enylphenol	Y	A		GRAS		Y		Y	
6-Methylcoumarine	Y	A		GRAS					
Acetaldehyde	Y	A		GRAS	Acceptable				Y
Acetic acid	Y	A		GRAS	Acceptable	Y	Y	Y	Y
Acetophenone	Y	A		GRAS	Acceptable	Y		Y	Y
African marigold oil (Tagetes)	Y		N3			Y		Y	Y
Alanine	Y					Y		Y	
alpha-Ionone	Y	A		GRAS	ADI : 0-0,1 mg/kg	Y		Y	
alpha-Isomethyl ionone	Y	A		GRAS					
Anethole	Y	A		GRAS	ADI : 0-2 mg/kg	Y		Y	
Anise oil	Y		N2	GRAS					
Balsam Peru oil	Y		N2	GRAS		Y		Y	
Balsam tolu oil	Y		N2	GRAS					
Beeswax oil	Y				Acceptable			Y	
Benzaldehyde	Y	A		GRAS	Acceptable	Y		Y	Y
Benzoic acid	Y			GRAS	ADI : 0-5 mg/kg		Y		
Benzoin oil	Y		N2	GRAS		Y		Y	
Benzophenone	Y	B		GRAS		Y		Y	
Benzyl acetate	Y	B		GRAS	Acceptable				
Benzyl alcohol	Y	A		GRAS	ADI : 0-5 mg/kg	Y		Y	Y
Benzyl benzoate	Y	A		GRAS	Acceptable	Y		Y	
Benzyl butyrate	Y	A		GRAS					
Benzyl cinnamate	Y	A		GRAS		Y		Y	
Bergamot oil	Y		N2	GRAS					Y
beta-Damasconone	Y			GRAS		Y			
beta-Damascone	Y	B		GRAS	Acceptable	Y		Y	
beta-Ionone	Y	A		GRAS	ADI : 0-0,1 mg/kg	Y			

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JEFCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
Butan-2,3-dione	Y	A		GRAS	Acceptable	Y		Y	
Butyric acid	Y	A		GRAS	Acceptable	Y		Y	
Caramel	N					Y		Y	Y
Carob bean extract	Y		N2	GRAS		Y		Y	Y
Carrot seed oil	Y		N3	GRAS		Y		Y	
Cassia bark oil	Y		N2	GRAS				Y	Y
Celery seed oil	Y		N2	GRAS		Y		Y	
Cinnamaldehyde	Y	A		GRAS	Acceptable	Y		Y	
Cinnamic acid	Y	A		GRAS	Acceptable	Y		Y	
Cinnamon leaf oil	Y		N2	GRAS		Y		Y	Y
Cinnamyl acetate	Y	B		GRAS	Acceptable			Y	
Cinnamyl alcohol	Y	B		GRAS		Y		Y	
Cinnamyl cinnamate	Y	A		GRAS		Y		Y	
Cinnamyl isobutyrate	Y	B		GRAS	Acceptable				
cis-3-Hexenol	Y	A		GRAS	Acceptable				
cis-3-Hexenyl acetate	Y	B		GRAS					
cis-3-Hexenyl propionate	N								
Citral	Y	A		GRAS	ADI : 0-0,5 mg/kg	Y		Y	Y
Citric acid	Y	A		GRAS	ADI : not limited	Y	Y	Y	Y
Citronellol	Y	A		GRAS	ADI : 0-0,5 mg/kg	Y		Y	Y
Citronellyl formate	Y	A		GRAS	Acceptable				Y
Clove leaf oil	Y		N2	GRAS					Y
Cocoa and cocoa products	Y		N2			Y		Y	Y
Coffee extract	Y		N2					Y	Y
Cognac oil, green									
Coriander oil	Y		N2	GRAS		Y		Y	Y
Cumin oil	Y		N2	GRAS					Y
Davana oil	Y		N2	GRAS		Y		Y	
Decanal	Y	A		GRAS	Acceptable	Y		Y	Y
Decano-1,4-lactone	Y	A		GRAS	Acceptable	Y		Y	Y
Decano-1,5-lactone	Y	B		GRAS	Acceptable	Y		Y	
Dimethyl sulfide	Y	A		GRAS					
Dodecano-1,4-lactone	Y	A		GRAS	Acceptable	Y		Y	Y
Dodecano-1,5-lactone	Y	B		GRAS		Y		Y	
Ethyl 2-methylbutyrate	Y	B		GRAS	Acceptable	Y		Y	
Ethyl acetate	Y	A		GRAS	ADI : 0-25 mg/kg	Y		Y	Y

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JEFCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
Ethyl acetoacetate	Y	B		GRAS				Y	
Ethyl butyrate	Y	A		GRAS	ADI : 0-15 mg/kg	Y		Y	Y
Ethyl crotonate	Y	B		GRAS					
Ethyl decanoate	Y	A		GRAS	Acceptable	Y		Y	Y
Ethyl dodecanoate	Y	A		GRAS	ADI : 0-1 mg/kg	Y		Y	Y
Ethyl heptanoate	Y	A		GRAS	ADI : 0-2,5 mg/kg	Y		Y	
Ethyl hexadecanoate	Y	B		GRAS	Acceptable			Y	Y
Ethyl hexanoate	Y	A		GRAS	Acceptable	Y		Y	Y
Ethyl isovalerate	Y	B		GRAS	Acceptable	Y		Y	
Ethyl lactate	Y	A		GRAS	Acceptable	Y		Y	
Ethyl levulinate	Y	B		GRAS				Y	
Ethyl nonanoate	Y	A		GRAS	ADI : 0-2,5 mg/kg	Y		Y	
Ethyl octadecanoate	Y			GRAS	Acceptable				Y
Ethyl octanoate	Y	A		GRAS	Acceptable	Y		Y	
Ethyl oleate	Y	A		GRAS	Acceptable				Y
Ethyl phenylacetate	Y	B		GRAS		Y		Y	Y
Ethyl propionate	Y	A		GRAS	Acceptable	Y		Y	
Ethyl tetradecanoate	Y	B		GRAS	Acceptable	Y		Y	Y
Ethylmaltol	Y	A		GRAS	ADI : 0-2 mg/kg	Y		Y	
Ethylvanillin	Y	A		GRAS	Acceptable	Y		Y	
Eugenol	Y	A		GRAS	ADI : 0-2,5 mg/kg	Y		Y	
Farnesol	Y	B		GRAS		Y		Y	
Fenugreek oil	Y		N2	GRAS		Y		Y	
Fruits (fresh, dried extracts)	Y		N1	GRAS					Y
Furfural	Y	B		GRAS	ADI : 0-0,5 mg/kg				
gamma-Terpinene	Y			GRAS					
Genet oil	Y		N2						
Geraniol	Y	A		GRAS		Y		Y	Y
Geranium oil	Y		N2	GRAS		Y		Y	Y
Geranyl acetate	Y	A		GRAS	ADI : 0-0,5 mg/kg	Y		Y	Y
Geranyl butyrate	Y	A		GRAS	Acceptable	Y		Y	Y
Geranyl hexanoate	Y	A		GRAS					
Geranyl propionate	Y	A		GRAS	Acceptable				
Geranylacetone	Y			GRAS		Y			
Guaiaic wood oil	Y		N3	GRAS		Y		Y	

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JECCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
Helychrysum (Immortelle) oil	Y		N2						
Heptano-1,4-lactone	Y	A		GRAS	Acceptable	Y		Y	
Hexano-1,4-lactone	Y	A		GRAS	Acceptable	Y		Y	Y
Hexyl acetate	Y	A		GRAS		Y		Y	
Indole	Y	A		GRAS					
Isobutanol	Y	A		GRAS	Acceptable	Y		Y	
Isopentanol	Y	A		GRAS	ADI : 0-3 mg/kg				
Isopentyl acetate	Y	A		GRAS	ADI : 0-3 mg/kg	Y		Y	Y
Isopentyl benzoate	Y	B		GRAS		Y		Y	
Isopentyl butyrate	Y	A		GRAS		Y		Y	
Isopentyl isovalerate	Y	B		GRAS	Acceptable	Y		Y	
Isopentyl phenylacetate	Y	B		GRAS		Y		Y	Y
Isovaleraldehyde	Y	A		GRAS	Acceptable	Y		Y	
Isovaleric acid	Y	A		GRAS	Acceptable	Y		Y	
Lactic acid	Y	A		GRAS	Acceptable	Y	Y	Y	
Lavander oil	Y		N2	GRAS					
Lemon oil	Y		N2	GRAS		Y		Y	Y
Leucine	Y			GRAS					
Licorice (powder and extracts)	Y		N2	GRAS		Y	Y	Y	Y
Limonene	Y	B		GRAS	ADI : not specified	Y			
Linalool	Y	A		GRAS	ADI : 0-0,5 mg/kg	Y		Y	Y
Linalool oxide	Y			GRAS	ADI : 0-0,5 mg/kg				
Linalyl acetate	Y	A		GRAS	ADI : 0-0,5 mg/kg	Y		Y	
Lovage oil	Y		N2	GRAS				Y	Y
Lysine	Y			GRAS					
Malt extract	N								
Maltol	Y	A		GRAS	ADI : 0-1 mg/kg	Y		Y	Y
Maltyl isobutyrate	Y			GRAS					
Mandarin oil	Y		N2	GRAS		Y		Y	Y
Maple extract	Y			GRAS		Y		Y	
Menthol	Y	A		GRAS	ADI : 0-0,2 mg/kg	Y	Y	Y	
Menthyl acetate	N								
Methyl 2-naphtylketone	Y	B		GRAS					
Methyl 2-octynoate	Y	A		GRAS					
Methyl anthranilate	Y	A		GRAS	ADI : 0-1,5 mg/kg	Y		Y	
Methyl cinnamate	Y	A		GRAS					

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JEFCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
Methyl N-methylantranilate	Y	A		GRAS					Y
Methyl phenylacetate	Y	B		GRAS	No ADI allocated	Y		Y	Y
Methylpyrazine	Y	B		GRAS	Acceptable			Y	Y
Nerol	Y	B		GRAS		Y		Y	
Nerolidol	Y	B		GRAS					
Neryl acetate	Y	B		GRAS					
Neryl butyrate	Y	B		GRAS	Acceptable				
Nonano-1,4-lactone	Y	A		GRAS	ADI : 0-1,25 mg/kg			Y	
Nutmeg oil	Y		N2	GRAS		Y		Y	Y
Octano-1,4-lactone	Y	B		GRAS	Acceptable	Y		Y	
Orange blossom oil	Y		N2	GRAS		Y		Y	
Orange oil	Y		N2	GRAS		Y		Y	Y
Pentan-2,3-dione	Y	A		GRAS	Acceptable			Y	
Pentano-1,4-lactone	Y	A		GRAS	Acceptable	Y		Y	
Pentanol	Y	A		GRAS	Acceptable				
Pentyl isovalerate	Y	B		GRAS					
Petitgrain oil	Y		N2	GRAS		Y		Y	
Phenethyl acetate	Y	B		GRAS		Y		Y	
Phenethyl benzoate	Y	B		GRAS					
Phenethyl isovalerate	Y	B		GRAS		Y		Y	Y
Phenylacetic acid	Y	B		GRAS		Y		Y	Y
Phosphoric acid						Y			
Piperonal	Y	A		GRAS	Acceptable	Y		Y	Y
Pipsissewa leaf oil	Y		N3	GRAS				Y	
Proline	Y			GRAS					
Propionic acid	Y	A		GRAS	Not limited			Y	
Propyl acetate	Y	A		GRAS					
Pyroligneous acid extract	Y		N2	GRAS				Y	Y
Pyruvic acid	Y	A		GRAS		Y		Y	
Rose oil	Y		N2	GRAS		Y		Y	Y
Rum	N								
Salicyladehyde	Y	B		GRAS		Y		Y	
Sodium saccharin	N								
Styrax oil	Y		N2	GRAS		Y		Y	Y

Ingredient	Referenced in Council of Europe lists	Council of Europe classification Chemically-defined compounds	Council of Europe classification Natural substances	FEMA-GRAS status	JEFCA Evaluation	Smoke studies literature survey availability (BzT Review)			Tested in Altadis studies
						Chemical studies	Pyrolysis studies	Biological studies	
Tartaric acid	Y	A		GRAS	No ADI allocated	Y		Y	
Tea oil	Y			GRAS					
Tetramethylpyrazine	Y	B		GRAS	Acceptable			Y	Y
Threonine	N								
trans 2-hexenal	Y	A		GRAS	Acceptable			Y	
trans 2-hexenyl acetate	Y	A		GRAS					
Trimethylpyrazine	Y	B		GRAS		Y		Y	
Undecano-1,4-lactone	Y	A		GRAS	ADI : 0-1,25 mg/kg	Y		Y	
Valerian oil	Y		N2	GRAS		Y		Y	
Vanillin	Y	A		GRAS	Acceptable	Y		Y	Y
Zingerone	Y	B		GRAS					