

Appendix A

**Description of Representative Products
From Four Broad Categories of Smokeless
Tobacco Products Used Globally**

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The smokeless tobacco products presented here are grouped into categories based on chemical composition as revealed by product packaging and chemical data that are presently available; this view of product composition is likely to change as additional data become available. This categorization does not indicate the safety or the addictive properties of a product, product type, or category, but is intended to highlight constituents of concern and may aid in further investigation and research. Some products (moist snuff, snus, rapé, etc.) can fit into additional categories based on their individual composition. Category 4 products, although similar in some ways to products in other categories, contain agents such as khat, caffeine, and coumarin, which warrant individual consideration.

Product name (other names)	Region*/country of use	Mode of use†	Production‡	Form/type of tobacco	Added ingredients
Category 1. Tobacco with little or no amounts of alkaline agents (generally <math>pH7</math>)					
Gundi (Kadapan)	SEAR: India	C, IN	Cottage	Tobacco (coarsely powdered)	Coriander seeds, other spices, and aromatic, resinous oils
Hogesoppu (leaf tobacco)	SEAR: India	C, IN	Cottage	Unprocessed tobacco bundled in long strands	
Kaddipudi	SEAR: India	C, IN	Cottage	Powdered sticks of raw tobacco stalks and petioles	Sometimes molasses and water
Kiwam (qiwam, kimam)	EMR: Pakistan SEAR: Nepal, India, Bangladesh	C, H, IN	Commercial	Tobacco (boiled)	Spices (cardamom, saffron, and/or aniseed), additives such as musk, and may contain silver flecks
Loose leaf	AMR: United States	C, H, S	Commercial	Tobacco leaves (air-cured)	Sugar and/or licorice and other sweeteners
Mishri (masheri, misri)	SEAR: India	A, D, S	Cottage; Custom	Tobacco (toasted, powdered)	
Moist snuff (low pH)	AFRO: South Africa AMR: United States, Canada, Mexico	H, S	Commercial	Tobacco (fermented, air- or fire-cured)	Flavorings (spices, essential oils, extracts), sweeteners, inorganic salts, humectants, preservatives
Neffa	AFR: Algeria EMR: Libya, Tunisia	N	Cottage; Custom	Tobacco (dry)	

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Nicotine chewing gum	WPR: Guam, Japan	C	Commercial	Tobacco (finely ground)	Chewing gum base, xylitol
Pañiwalla without lime	SEAR: India	C, IN	Cottage	Tobacco (sun-dried, flaked)	
Plug	AMR: United States	C, H, S	Commercial	Tobacco leaves	Licorice, sweeteners
Red toothpowder (lai dant manjan)	SEAR: India	A, D	Commercial	Tobacco (powdered)	Herbs, flavorings. Additional plant-related ingredients such as ginger, pepper, and camphor, among others, may be used.
Snus (low pH)	AFR: South Africa AMR: United States, Canada, Brazil EUR: Sweden, Norway, Finland, Denmark, Iceland	H	Commercial	Tobacco (heat-treated, pasteurized)	Sodium carbonate, moisturizers, salt (sodium chloride), sweeteners, flavorings, water
Tapkeer (bajjar, dry snuff)	SEAR: India	A, H, N	Custom	Tobacco (fermented, fire-cured)	Flavorings may be added.
Tobacco leaf	SEAR: India, Bangladesh, Myanmar, Bhutan	C, IN	Custom	Tobacco leaves (dry)	
Tumbaco	AFR: Congo	N	Cottage	Tobacco (dry)	
Twist	AMR: United States	C, H	Commercial	Tobacco (dark and air-cured leaf)	Tobacco leaf extracts and sometimes sweetener or flavorings
Watery tobacco	SEAR: Myanmar	G	Cottage	Tobacco	Water
Zarda	EMR: Yemen SEAR: India, Bangladesh, Myanmar, Nepal, Bhutan	C, IN	Commercial	Tobacco	Slaked lime or other alkaline agents, spices, vegetable dyes, and sometimes areca nut and/or silver flecks
Category 2. Tobacco with appreciable amounts of alkaline agents (>pH 7)					
Chimó	AMR: Venezuela, Columbia	H, S	Commercial; Cottage	Tobacco leaf	Baking soda (sodium bicarbonate), brown sugar, ashes from the Mamón tree (Melicocca bijuga), and vanilla and anisette flavoring. Ingredients vary by region.
Creamy snuff	SEAR: India	A	Commercial	Tobacco	Clove oil, glycerin, spearmint, menthol, camphor, water

Product name (other names)	Region* /country of use	Mode of use†	Production‡	Form/type of tobacco	Added ingredients
Dissolvables	AMR: United States	D, H, S	Commercial	Ground tobacco pressed into tablets, strips, or sticks	Binders, humectants, sweeteners, colorings, preservatives, alkaline agents, flavorings
Dry snuff	AFR: South Africa, Nigeria AMR: Canada, United States EUR: Germany	H, N, S	Commercial	Tobacco (fermented, fire-cured)	Flavoring, alkaline agents
Ghana traditional snuff (tawa)	AFR: Ghana	H, N	Cottage; Custom	Tobacco leaves (dry)	Saltpeter (potassium nitrate), ashes
Guakhu/ Guakha	SEAR: India	A, H	Commercial; Custom	Tobacco (powdered)	Molasses, red soil, slaked lime
Gul	SEAR: India, Bangladesh	A, D	Commercial	Pyrolysed tobacco leaves	Sugar or molasses, alkaline modifiers, and other unknown ingredients
Iqnik	AMR: United States (Alaska)	C	Custom	Tobacco	Tree fungus ash (also known as punk, araq, or buluq ash) or other ash derived from burning driftwood or willow bushes
Khaini	SEAR: India, Bangladesh, Nepal, Bhutan	S, H, C	Commercial; Custom	Tobacco	Slaked lime paste and sometimes areca nut
Maras	EUR: Turkey	A	Custom	Sun-dried tobacco	Ashes from oak, walnut, or grapevine
Moist snuff (high pH)	AFRO: South Africa AMR: United States, Canada, Mexico	H, S	Commercial	Tobacco (fermented, air- or fire-cured)	Flavorings (spices, essential oils, extracts), sweeteners, inorganic salts, humectants, preservatives
Nass (naswar)	AFR: South Africa EMR: Pakistan, Iran, Afghanistan, United Arab Emirates EUR: Turkmenistan	C, H, S	Cottage; Custom	Tobacco	Nass: ash, cotton or sesame oil, water, and sometimes lime or gum Naswar: slaked lime, ash, indigo (or other coloring agent), oil, water, and sometimes flavorings such as cardamom and menthol
Nasway (nasvay)	EUR: Uzbekistan, Kyrgyzstan	H, S	Cottage; Custom	Tobacco leaves (sun- and heat-dried)	Tobacco leaves, slaked lime, water, and sometimes ash from tree bark, butter or oil, flavorings, or coloring agents
Nigerian traditional snuff (taaba)	AFR: Nigeria, Cameroon, Senegal, Chad, Uganda	H, N, S	Cottage; Custom	Tobacco (dry, fermented)	Naïron (a mixture of sodium bicarbonate and sodium chloride)

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Shammah	AFR: Algeria EMR: Saudi Arabia, Yemen	H, S	Cottage; Custom	Tobacco	Slaked lime, ash, black pepper, oil, flavorings, and bombosa (sodium carbonate)
Snus (high pH)	AFR: South Africa AMR: United States, Canada, Brazil EUR: Sweden, Norway, Finland, Denmark, Iceland	H	Commercial	Tobacco (heat-treated, pasteurized)	Sodium carbonate, moisturizers, salt (sodium chloride), sweeteners, flavorings, water
Tobacco water (tuiber)	SEAR: India	G, H	Cottage; Custom	Tobacco smoke	Water, alkaline agents
Toombak	EMR: Sudan	H, N, S	Cottage; Custom	Tobacco (fermented, sun-dried)	Afrun (sodium bicarbonate)
Traditional South African snuff (snuif)	AFRO: South Africa, Lesotho, Swaziland	N, S	Cottage; Custom	Tobacco leaf (sun-dried)	Ash from local plants (e.g., amaranthus, aloe vera leaves)
Category 3. Tobacco with various alkaline modifiers and areca nut					
Betel quid (paan)	EMR: Pakistan, United Arab Emirates SEAR: India, Sri Lanka, Bangladesh, Myanmar, Thailand, Indonesia, Nepal, Maldives WPR: Lao Democratic People's Republic, Palau, Cambodia, Malaysia, Vietnam, Federal States of Micronesia	C, H	Cottage; Custom	Tobacco. Other smokeless tobacco products may be used such as kiwam and zarda.	Areca nut, slaked lime, betel leaf, and often catechu. Other ingredients vary regionally: cardamom, saffron, cloves, aniseed, turmeric, mustard, sweeteners
Dohra	SEAR: India	C	Custom	Tobacco	Areca nut, slaked lime or other alkaline agents, and other ingredients such as catechu, peppermint, cardamom
Gutka	EMR: Pakistan SEAR: India, Bangladesh, Nepal, Myanmar, Sri Lanka	C, H	Commercial; Cottage	Tobacco	Areca nut, slaked lime or other alkaline agents, catechu, sweeteners, and flavorings
Kharrā	SEAR: India	C	Cottage; Custom	Tobacco	Areca nut, lime, and catechu

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Mainpuri (k Kapoori)	SEAR: India	C, H, IN	Cottage; Custom	Tobacco	Slaked lime or other alkaline agents, areca nut, camphor, and other spices
Mawa	SEAR: India	C	Cottage; Custom	Tobacco	Slaked lime, areca nut
Tombol (bitter tombol)	EMR: Middle East	C, H	Custom	Tobacco	Areca nut (fofal), slaked lime, noura, betel leaf (tombol leaf), catechu, and flavorings such as clove oil, cardamom, or herbal medicine
Tombol (sweet tombol)	EMR: Yemen	C, H	Custom	Tobacco	Areca nut (fofal), slaked lime, noura, betel leaf (tombol leaf), catechu, and sweeteners such as coconut
Category 4. Tobacco with other plant material (tonka bean, cinnamon, clove, etc.) containing additional toxicants (coumarin, camphor, eugenol), stimulants (khat, caffeine), etc.					
Caffeinated moist snuff	AMR: United States	H	Commercial	Tobacco (fermented, air- or fire-cured)	Caffeine, flavorings (spices, essential oils, extracts), sweeteners, inorganic salts, humectants, preservatives, ginseng, B and C vitamins
Rapé and NuNu	AMR: Brazil	N	Cottage	Tobacco leaf (dried)	One or more ingredients: tonka bean, clove, cinnamon powder, camphor, Peruvian cocoa, cassava, ashes from select trees
Tombol with khat	EMR: Yemen	C, IN	Custom	Tobacco	Areca nut (fofal), slaked lime, noura, betel leaf (tombol leaf), catechu, and khat

*World Health Organization regions:

- AFR: African Region
- AMR: Region of the Americas
- EMR: Eastern Mediterranean Region
- EUR: European Region
- SEAR: South-East Asia Region
- WPR: Western Pacific Region

†Mode of use categories:

- A = Applied to the teeth or gums
- C = Chewed
- D = Dentifrice (teeth cleaning)
- DI = Dissolves in the mouth
- G = Gargled
- H = Held in mouth
- IN = Ingredient in betel quid or other custom-made product
- N = Nasal use
- S = Sucked

‡Production category definitions:

- Commercial: Product is commercially manufactured (large-scale, branded).
- Cottage: Product is manufactured by local, small-scale industry (sometimes family-run business, not branded).
- Custom: Product is prepared by a vendor or in the home.

