Tobacco Product: Brand X Roll Your Own Tobacco

All tobacco products contain chemicals.

The purpose of this list is to provide information about the chemicals in this tobacco product that researchers have linked to health problems. Research is on going to find out which chemicals in tobacco and tobacco smoke cause harm.

There may be other health problems and chemicals that have not been discovered yet.

Tobacco companies test their tobacco for these chemicals and report the amounts to the FDA.

Please note: There is no safe tobacco product. Based on what we currently know, you can not tell your chance of developing a health problem by the number of chemicals or the amount of a chemical in a tobacco product.

Amount Per Gram	Amount Per Cigarette	CHEMICAL	Cancer	Lung Disease	Heart and Blood Vessel Problems	Reproductive Problems	Addiction
170 - 370 mg	✦	Ammonia		■			
40 - 120 ng	✦	Arsenic	■		■	■	
41 - 62ng	✦	Cadmium	■	■		■	
0.1 – 1.6 µg	✦	4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	■				
11.3 – 26.7 mg	✦	Nicotine				■	■
0.9 – 6.9 µg	✦	N-Nitrosonornicotine (NNN)	■				

The information is not currently available on the following chemicals.

Amount Per Gram	Amount Per Cigarette	CHEMICAL	Cancer	Lung Disease	Heart and Blood Vessel Problems	Reproductive Problems	Addiction
	✦	Acetaldehyde	■	■			■
	✦	Acetamide	■				
✦	✦	Acetone		■			
✦	✦	Acrolein		■	■		
	✦	Acrylamide	■				
	✦	Acrylonitrile	■	■			
✦		Aflatoxin B1	■				
	✦	4-Aminobiphenyl	■				
	✦	1-Aminonaphthalene	■				
	✦	2-Aminonaphthalene	■				
✦	✦	Anabasine					■
✦	✦	o-Anisidine	■				
	✦	A-α-C (2-Amino-9H-pyrido[2,3-b]indole)	■				
✦	✦	Benz[a]anthracene	■		■		
	✦	Benz[j]aceanthrylene	■				
✦	✦	Benzene	■		■	■	
✦	✦	Benzo[b]fluoranthene	■		■		
	✦	Benzo[k]fluoranthene	■		■		
	✦	Benzo[b]furan	■				
✦	✦	Benzo[a]pyrene	■				
	✦	Benzo[c]phenanthrene	■				
✦	✦	Beryllium	■				
	✦	1,3-Butadiene	■	■		■	
✦	✦	Caffeic acid	■				
	✦	Carbon monoxide				■	
✦	✦	Catechol	■				
	✦	Chlorinated dioxins/furans	■			■	
✦	✦	Chromium	■	■		■	
✦	✦	Chrysene	■		■		
✦	✦	Cobalt	■		■	■	
✦		Coumarin (banned in food)					
✦	✦	Cresols (o-, m-, and p-cresol)	■	■			
✦	✦	Crotonaldehyde	■				
	✦	Cyclopenta[c,d]pyrene	■				

A machine is used to test for these chemicals. The amount of chemical that gets into the body may be higher or lower depending on how a person uses the tobacco product. Companies may use different tests to measure these chemicals. Results may vary.

KEY

Chemicals have been linked to:

- Cancer
- Lung Disease
- Heart and Blood Vessel Problems
- Reproductive Problems
- Addiction

ND Not Detected

✦ The information is not currently available

Where do these chemicals come from?

Many of these chemicals come from the **tobacco leaf** and the **smoke**. The rest come from the filter, glue, ink, paper and additives.

mg= milligram
µg = microgram
ng = nanogram
pg= picogram

Tobacco Product: Brand X Roll Your Own Tobacco

Amount Per Gram	Amount Per Cigarette	CHEMICAL	Cancer	Lung Disease	Heart and Blood Vessel Problems	Reproductive Problems	Addiction
	✦	Dibenz[a,h]anthracene	■				
	✦	Dibenzo[a,e]pyrene	■				
	✦	Dibenzo[a,h]pyrene	■				
	✦	Dibenzo[a,i]pyrene	■				
	✦	Dibenzo[a,l]pyrene	■				
✦	✦	2,6-Dimethylaniline	■				
✦	✦	Ethyl carbamate (urethane)	■			■	
✦	✦	Ethylbenzene	■				
	✦	Ethylene oxide	■	■		■	
✦	✦	Formaldehyde	■	■			
	✦	Furan	■				
	✦	Glu-P-1 (2-Amino-6-methyldipyrido[1,2-a:3',2'-d] imidazole)	■				
	✦	Glu-P-2 (2-Aminodipyrido[1,2-a:3',2'-d]imidazole)	■				
✦	✦	Hydrazine	■	■			
✦	✦	Hydrogen cyanide		■	■		
	✦	Indeno[1,2,3-cd]pyrene	■				
	✦	IQ (2-Amino-3-methylimidazo[4,5-f]quinoline)	■				
	✦	Isoprene	■				
✦	✦	Lead	■		■	■	
	✦	MeA-α-C (2-Amino-3-methyl)-9H-pyrido[2,3-b]indole)	■				
✦	✦	Mercury	■			■	
	✦	Methyl ethyl ketone		■			
✦	✦	5-Methylchrysene	■				
✦	✦	Naphthalene	■	■			
✦	✦	Nickel	■	■			
	✦	Nitrobenzene	■	■		■	
	✦	Nitromethane	■				
	✦	2-Nitropropane	■				
✦	✦	N-Nitrosodiethanolamine (NDELA)	■				
✦	✦	N-Nitrosodiethylamine (NDEA)	■				
✦	✦	N-Nitrosodimethylamine (NDMA)	■				
✦	✦	N-Nitrosomethylethylamine	■				
✦		N-Nitrosomorpholine (NMOR)	■				
✦	✦	N-Nitrosopiperidine (NPIP)	■				
✦	✦	N-Nitrosopyrrolidine (NPYR)	■				
✦		N-Nitrososarcosine (NSAR)	■				
✦		Nornicotine					■
✦	✦	Phenol		■	■		
	✦	PhIP (2-Amino-1-methyl-6-phenylimidazo [4,5-b] pyridine)	■				
✦	✦	Polonium-210	■				
✦	✦	Propionaldehyde		■	■		
✦	✦	Propylene oxide	■	■			
✦	✦	Quinoline	■				
✦	✦	Selenium		■			
✦	✦	Styrene	■				
✦	✦	2-Toluidine	■				
✦	✦	Toluene		■		■	
	✦	Trp-P-1 (3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole)	■				
	✦	Trp-P-2 (1-Methyl-3-amino-5H-pyrido[4,3-b]indole)	■				
✦		Uranium-235	■	■			
✦		Uranium-238	■	■			
	✦	Vinyl acetate	■	■			
✦	✦	Vinyl chloride	■				

A machine is used to test for these chemicals. The amount of chemical that gets into the body may be higher or lower depending on how a person uses the tobacco product. Companies may use different tests to measure these chemicals. Results may vary.

KEY

Chemicals have been linked to:

- Cancer
- Lung Disease
- Heart and Blood Vessel Problems
- Reproductive Problems
- Addiction

ND Not Detected

✦ The information is not currently available

Where do these chemicals come from?

Many of these chemicals come from the **tobacco leaf** and the **smoke**. The rest come from the filter, glue, ink, paper and additives.

mg= milligram
µg = microgram
ng = nanogram
pg= picogram