



## ADVANCE Lights Kings Onsert

Brown & Williamson Tobacco is providing this information so adult consumers have a basis for making informed choices.

*There is no such thing  
as a safe cigarette.*

# ADVANCE®

**All of the taste . . .  
Less of the toxins.™**

Reduced levels of toxins compared to the leading lights brand styles.

There is not enough medical information to know if Advance with less toxins will lower health risks.

ADVANCE cigarettes, made with premium tobaccos, combine two important new technologies to deliver rich tobacco taste and reduce the levels of many toxins.

First, our 3-part TRIONIC™ Filter employs a unique combination of filtration elements to reduce the particulate matter commonly known as "tar," and to specifically reduce the amounts of many toxins.

Second, a patented tobacco curing process significantly inhibits the formation of tobacco-specific nitrosamines (TSNAs), a group of toxins in tobacco and tobacco smoke.

This combination of curing and filtration technologies results in less toxins across several categories, as shown in the following tables.

These results are based on Brown & Williamson internal laboratory analyses of ADVANCE Lights Kings and the top two lights products on the market in May 2001.

FTC method	Top 2 Selling Lights King Size Brand Styles	
	Avg. Levels	Advance Levels
Tar (mg/cig)	10.5	10
Nicotine (mg/cig)	0.8	0.8

The FTC method compares the tar and nicotine yields of different cigarettes when smoked by a machine under identical laboratory conditions. These numbers are intended to provide consumers with a comparative reference point rather than to guarantee a particular smoke intake. Critics have claimed that tar and nicotine levels determined by the FTC method are misleading to consumers because, under actual smoking conditions, smokers can increase or decrease the amount of smoke that they take in depending on how they smoke their cigarettes. Many studies have confirmed that some smokers may substantially increase or decrease the smoke yield of their cigarette relative to the numbers predicted by the FTC method.

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**ONSERT FRONT**

## Toxic Smoke Constituents

The following smoke constituents are those listed in proposed regulations by the MA Dept. of Public Health. Results may vary due to storage and handling conditions and methodological procedures.

	Top 2 Selling Lights King Size Brand Styles		Advance	
	Avg. Levels	Avg. Levels	%	Change
<b>TSNA (ng/cig):</b>				
N'-nitrosanornicotine(NNN)*	118	30.9	74	↓
4-(methylnitrosamino)-1(3-pyridyl)-1-butanone(NNK)*	95.1	19.2	80	↓
N'-Nitrosoanatabine(NAT)	134	75.8	43	↓
N'-Nitrosoanabasine(NAB)	19.9	9.2	54	↓
<b>Aromatic Amines (ng/cig):</b>				
1-Aminonaphthalene	17.8	18.0	NSD	
2-Aminonaphthalene*	10.0	10.9	NSD	
3-Aminobiphenyl	4.7	5.0	NSD	

4-Aminobiphenyl*	3.0	2.6	NSD	
<b>Volatile Carbonyls (µg/cig):</b>				
Formaldehyde*	25.0	16.7	33	↓
Acetaldehyde*	450.6	301.1	33	↓
Acetone	204.5	142.6	30	↓
Acrolein	48.9	28.2	42	↓
Propionaldehyde	38.8	24.3	37	↓
Crotonaldehyde	8.2	4.2	49	↓
Methyl Ethyl Ketone (MEK)	55.4	31.7	43	↓
Butyraldehyde	5.1	3.0	41	↓
<b>Basic Semi-Volatiles (µg/cig):</b>				
Pyridine	9.7	4.2	57	↓
Quinoline	0.22	0.19	14	↓
<b>Phenolic Compounds (µg/cig):</b>				
Hydroquinone	42.2	48.1	NSD	
Resorcinol	1.7	0.4	76	↓
Catechol*	42.8	43.3	NSD	
Phenol	7.0	5.1	27	↓
m-p-Cresol	6.9	5.6	19	↓
o-Cresol	2.2	1.7	23	↓
<b>Volatiles (µg/cig):</b>				
1,3-Butadiene*	26.8	23.7	NSD	
Isoprene*	260.6	223.2	14	↓

Acrylonitrile*	11.2	7.8	30	↓
Benzene*	38.6	24.1	38	↓
Toluene	40.4	22.8	44	↓
Styrene*	3.8	1.7	55	↓
<b>Toxic Trace Metals (ng/cig):</b>				
Nickel*	BDL	BDL	—	
Lead*	17.6	14.4	NSD	
Cadmium*	53.5	16.7	69	↓
Chromium*	BDL	BDL	—	
Arsenic*	5.4	BDL	>79	↓
Selenium	BDL	BDL	—	
Mercury	3.03	2.55	16	↓
<b>Other:</b>				
Ammonia (µg/cig)	17.72	3.60	79	↓
Benzo[a]pyrene (ng/cig)*	6.6	6.7	NSD	
Carbon monoxide (mg/cig)	11.2	9.1	19	↓
Hydrogen cyanide (µg/cig)	83.2	31.6	62	↓
Nitric oxide (µg/cig)	192.3	82.3	57	↓

\* Substances considered by the International Agency for Research on Cancer (IARC) to be carcinogenic, probably carcinogenic, or possibly carcinogenic in humans.

BDL=Below Detectable Level

NSD=Not Statistically Different

↓=Lower

ng=nanograms µg=micrograms

**PACK ONSERT**

15-1210

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## ADVANCE Lights 100's Onsert

Brown & Williamson Tobacco is providing this information so adult consumers have a basis for making informed choices.

*There is no such thing as a safe cigarette.*

# ADVANCE<sup>®</sup>

**All of the taste . . .  
Less of the toxins.<sup>™</sup>**

Reduced levels of toxins compared to the leading lights brand styles.

There is not enough medical information to know if Advance with less toxins will lower health risks.

ADVANCE cigarettes, made with premium tobaccos, combine two important new technologies to deliver rich tobacco taste and reduce the levels of many toxins.

First, our 3-part TRIONIC<sup>™</sup> Filter employs a unique combination of filtration elements to reduce the particulate matter commonly known as "tar," and to specifically reduce the amounts of many toxins.

Second, a patented tobacco curing process significantly inhibits the formation of tobacco-specific nitrosamines (TSNAs), a group of toxins in tobacco and tobacco smoke.

This combination of curing and filtration technologies results in less toxins across several categories, as shown in the following tables.

These results are based on Brown & Williamson internal laboratory analyses of ADVANCE Lights 100's and the top two lights products on the market in May 2001.

FTC method	Top 2 Selling Lights 100's Brand Styles	
	Avg. Levels	Advance Levels
Tar (mg/cig)	10.5	10
Nicotine (mg/cig)	0.9	0.8

The FTC method compares the tar and nicotine yields of different cigarettes when smoked by a machine under identical laboratory conditions. These numbers are intended to provide consumers with a comparative reference point rather than to guarantee a particular smoke intake. Critics have claimed that tar and nicotine levels determined by the FTC method are misleading to consumers because, under actual smoking conditions, smokers can increase or decrease the amount of smoke that they take in depending on how they smoke their cigarettes. Many studies have confirmed that some smokers may substantially increase or decrease the smoke yield of their cigarette relative to the numbers predicted by the FTC method.

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## Toxic Smoke Constituents

The following smoke constituents are those listed in proposed regulations by the MA Dept. of Public Health. Results may vary due to storage and handling conditions and methodological procedures.

	Top 2 Selling Lights 100's Brand Styles		Advance	
	Avg. Levels	Levels	% Change	
<b>TSNA (ng/cig):</b>				
N'-nitrosanornicotine(NNN)*	132	35.8	73↓	
4-(methylnitrosamino)- 1(3-pyridyl)- 1-butanone(NNK)*	104	19.3	81↓	
N'-Nitrosanatabine(NAT)	138	77.6	44↓	
N'-Nitrosanabasine(NAB)	20.5	10.5	49↓	
<b>Aromatic Amines (ng/cig):</b>				
1-Aminonaphthalene	18.1	16.2	NSD	
2-Aminonaphthalene*	10.4	10.4	NSD	
3-Aminobiphenyl	4.6	4.8	NSD	
4-Aminobiphenyl*	2.6	2.5	NSD	
<b>Volatile Carbonyls (µg/cig):</b>				
Formaldehyde*	26.0	15.7	40↓	
Acetaldehyde*	455.7	262.7	42↓	
Acetone	228.6	132.7	42↓	
Acrolein	49.8	24.1	52↓	
Propionaldehyde	40.8	17.1	58↓	
Crotonaldehyde	8.4	3.3	61↓	
Methyl Ethyl Ketone (MEK)	58.4	23.8	59↓	
Butyraldehyde	5.9	2.8	53↓	
<b>Basic Semi-Volatiles (µg/cig):</b>				
Pyridine	7.6	3.7	51↓	
Quinoline	0.23	0.17	26↓	
<b>Phenolic Compounds (µg/cig):</b>				
Hydroquinone	47.8	40.4	15↓	
Resorcinol	2.0	0.4	80↓	
Catechol*	47.1	40.3	14↓	
Phenol	6.5	4.2	35↓	
m-p-Cresol	6.7	5.0	25↓	
o-Cresol	2.1	1.4	33↓	
<b>Volatiles (µg/cig):</b>				
1,3-Butadiene*	27.7	21.5	22↓	
Isoprene*	272.1	196.3	28↓	
Acrylonitrile*	11.9	6.9	42↓	
Benzene*	41.0	20.3	50↓	
Toluene	41.0	17.8	57↓	
Styrene*	3.6	1.4	61↓	
<b>Toxic Trace Metals (ng/cig):</b>				
Nickel*	BDL	BDL	—	
Lead*	15.1	15.2	NSD	
Cadmium*	49.5	13.6	73↓	
Chromium*	BDL	BDL	—	
Arsenic*	4.4	BDL	>75↓	
Selenium	BDL	BDL	—	
Mercury	3.04	2.84	NSD	
<b>Other:</b>				
Ammonia (µg/cig)	17.8	3.39	81↓	
Benzo[a]pyrene (ng/cig)*	6.9	6.5	NSD	
Carbon monoxide (mg/cig)	11.9	9.4	21↓	
Hydrogen cyanide (µg/cig)	74.4	25.9	65↓	
Nitric oxide (µg/cig)	194.7	100.5	48↓	

\* Substances considered by the International Agency for Research on Cancer (IARC) to be carcinogenic, probably carcinogenic, or possibly carcinogenic in humans.

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