The compounds shown below are all found in cigarette smoke. The mass figures, given in µg, take into account both mainstream (inhaled) and sidestream smoke. 1 µg is equal to 1 millionth of a gram. Amounts of these compounds vary in different brands of cigarettes - these figures are approximate.

**ESTIMATED NUMBER OF CHEMICAL COMPOUNDS IN CIGARETTE SMOKE**

7,357

**NUMBER OF THESE COMPOUNDS WITH CONFIRMED CARCINOGENIC ACTIVITY**

70

**NICOTINE**
- Approx. 919µg per cigarette
- Addictive
- Increases heart rate
- Increases blood pressure
- Increases blood glucose
- Lethal dose: around 500-1000mg

**ACETALDEHYDE**
- Approx. 680-1571µg per cigarette
- Known animal carcinogen
- Probable human carcinogen
- Irritant to skin & eyes
- Irritant to respiratory tract

**N-NITROSAMINES**
- Large class of compounds
- Several are tobacco-specific
- Known human carcinogens
- Most carcinogenic: NNK & NNN
- NNK: approx. 0.3µg per cigarette
- NNN: approx. 2-50µg per cigarette
- May cause reproductive damage

**1,3-BUTADIENE**
- Approx. 36-191µg per cigarette
- Known human carcinogen
- Suspected human teratogen
- Irritant to eyes & skin
- Irritant to upper respiratory tract

**ACROLEIN**
- Approx. 46-272µg per cigarette
- Known human carcinogen
- Damages bone marrow
- Lowers red blood cell count
- May harm reproductive organs

**BENZENE**
- Approx. 46-272µg per cigarette
- Known human carcinogen
- Includes 2-aminonaphthalene:
  - Known human carcinogen
  - Linked with bladder cancer
  - Approx. 0.04µg per cigarette

**AROMATIC AMINES**
- Large class of compounds
- Includes benzo[a]pyrene:
  - Known human carcinogen
  - Known DNA mutagen
  - Affects reproductive capacity
  - Up to 0.14µg per cigarette

**POLYAROMATICS**
- Large class of compounds
- Includes benzo[a]pyrene:
  - Known human carcinogen
  - Known DNA mutagen
  - Affects reproductive capacity
  - Up to 0.14µg per cigarette

**MAJOR SOURCE:** "CHEMICAL CONSTITUENTS IN CIGARETTE SMOKE - A REPORT TO THE NEW ZEALAND MINISTRY OF HEALTH," J. FOWLES, M. BATES & D. NOITON, MARCH 2000