

## Appendix to Technology Review

### Coaxial (Annular) Cigarette Technology

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The Coaxial Cigarette Technology provides a tool to position the different components of the blend in distinct parts of the cigarette that they are treated separately during the smoking process. This uses the principle that during puffing preferentially the peripheral areas of the cigarette are consumed while the center of the tobacco rod is pyrolyzed mainly during the interpuff period .

Thus the principle of Coaxial Cigarette Technology provides additional options to influence smoke formation and to shift smoke balance into extreme regimes.

Coaxial Cigarette Technology includes both an annular tobacco rod and an annular filter.

During the past years BATCF applied for in total 7 patents in the area of coaxial cigarette technology, of which the first three have already been granted in Germany. Another patent application covers the manufacture of such cigarettes.

A summary of this is given below.

1. Coaxial Cigarette I, Dec. 1987 (DE)  
it claims a coaxial tobacco rod with a coaxial filter.  
Basic application
2. Coaxial Cigarette II, Oct. 88 (DE)  
It describes a coaxial plain cigarette.
3. Coaxial Cigarette III, Jan. 89 (DE)  
It claims an inverse coaxial tobacco rod, i.e. the heat is produced mainly in the inner core, with different types of filters.

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4. Coaxial Cigarette IV, Febr. 89 (DE)  
It describes an adjustable coaxial filter with a controllable blow in the inner core of the filter.
5. Coaxial Cigarette V, March 91 (DE)  
It claims a coaxial tobacco rod with a ventilated standard filter. The tar/nicotine ratio can be optimized through a mixture of nicotine in the core and the periphery of the tobacco rod.
6. Coaxial Cigarette VI, Aug. 91 (DE)  
It claims a coaxial tobacco rod with a coaxial filter with an optimized reduction in sidestream.
7. Coaxial Cigarette VII, June 93  
It describes a coaxial tobacco rod with coaxial filter with a tobacco mixture zone between filter and tobacco rod, to admix the smoke components from inner core or periphery to the complementary flow
8. Coaxial Cigarette Production, 26.3.90  
It describes a possibility to manufacture coaxial cigarettes.

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