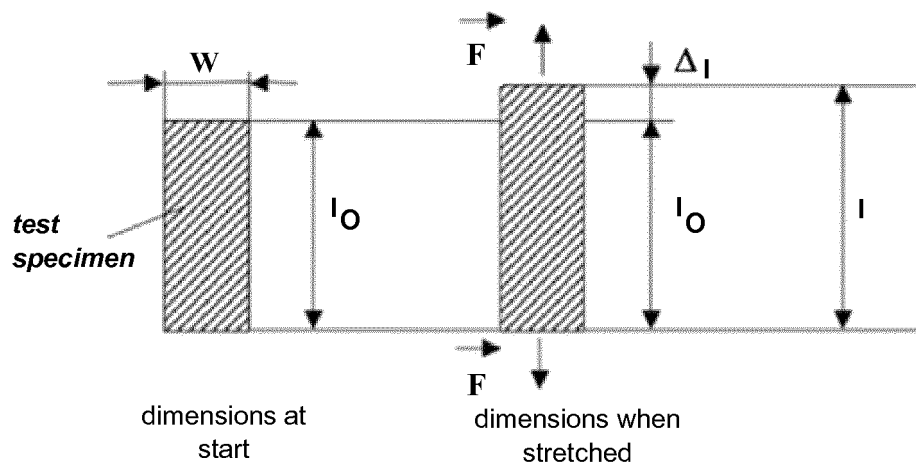
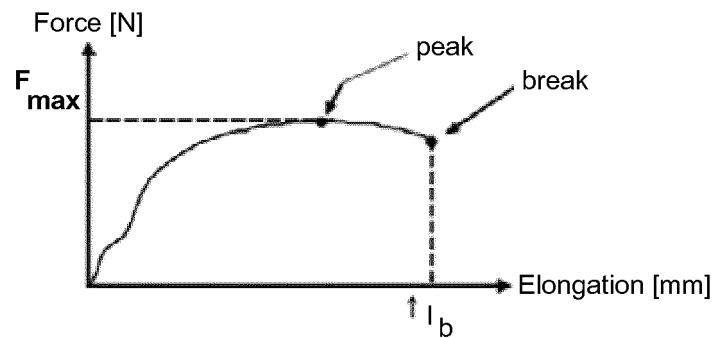




w	=	Width of the test specimen	[mm]
l_0	=	Initial length between grips	[mm]
l	=	Length between grips during the stretch	[mm]
Δl	=	Elongation during the stretch (* $l = l - l_0$)	[mm]
F	=	Force during the stretch	[N]

Figure 1



Definitions for plug wrap paper, cigarette paper, banded cigarette paper, tipping paper, and pre-cut tipping paper.

L	=	Load max	[N]
S	=	Tensile strength	[N/mm]
S at break	=	Tensile Breaking Strength	[N/15mm]
ε_b	=	Stretch at break	[%]
F_{max}	=	Maximum force during the stretch	[N]
w	=	Width of the test specimen	[mm]
l_0	=	Initial length between grips	[mm]
Δl_b	=	Elongation at break	[mm]

Figure 2

Tensile breaking strength $S = \frac{F_{max}}{w} \text{ [N/mm]}$

Stretch at Break $\varepsilon_b = \frac{\Delta l_b}{l_0} \cdot 100 \text{ [%]}$

Force at break of pre-cut tipping paper $L = \text{Load max [N]}$

	standard paper	
	standard measurement	
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	14.97	1.45
2	15.60	1.52
3	14.81	1.42
average	15.1	1.5
stdev	0.42	0.05
CV%	2.8	3.5

	High Wet Strength Paper	
	standard measurement	
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	15.39	1.98
2	14.55	1.89
3	15.52	1.93
average	15.2	1.9
stdev	0.53	0.05
CV%	3.5	2.3

Figure 3

	standard paper	
	2µl H ₂ O measurement	
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	0.56	0.55
2	0.77	0.63
3	0.75	0.72
average	0.7	0.6
stdev	0.12	0.09
CV%	16.7	13.4

	High Wet Strength Paper	
	2µl H ₂ O measurement	
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	6.38	0.93
2	6.28	1.18
3	6.05	0.86
average	6.2	1.0
stdev	0.17	0.17
CV%	2.7	17.0

Figure 4

	standard paper	
	2µl Glycerin measurement	
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	10.39	0.61
2	9.90	0.59
3	11.05	0.7
average	10.4	0.6
stdev	0.58	0.06
CV%	5.5	9.3

	High Wet Strength Paper	
	2µl Glycerin measurement	
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	13.06	1.48
2	13.85	1.51
3	13.33	1.55
average	13.4	1.5
stdev	0.40	0.04
CV%	3.0	2.3

Figure 5

	standard paper	
2μl H ₂ O + Glycerin measurement		
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	1.32	0.41
2	1.04	0.42
3	0.78	0.39
average	1.0	0.4
stdev	0.27	0.02
CV%	25.8	3.8

	High Wet Strength Paper	
2μl H ₂ O + Glycerin measurement		
	Tensile strength	Stretch at break
	[N/15mm]	[%]
1	7.94	0.67
2	8.12	0.76
3	7.38	0.66
average	7.8	0.7
stdev	0.39	0.06
CV%	4.9	7.9

Figure 6

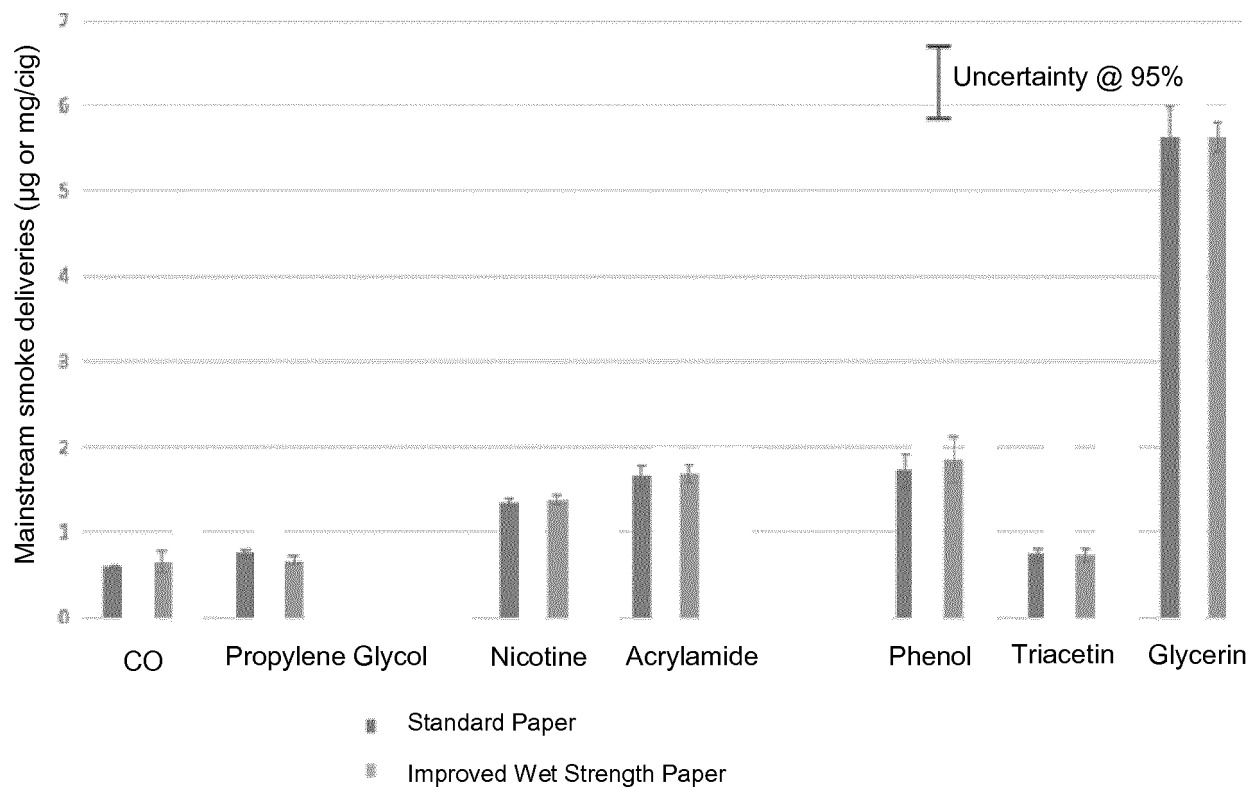


Figure 7