

Supplemental Table 1: Complete Statistical Results for Main Outcomes

| | DEQ Good (Peak) | DEQ Stimulatory (Peak) | DEQ Dislike (Peak) | DEQ Cooling (Peak) | MNWS | BQSU Factor 1 | BQSU Factor 2 |
|---|--|---|---|--|---|---|---|
| Cigarette type main effect | F(1,162) = 8.20, p=0.005 NMS>MS | F(1,163) = 5.28, p=0.02; NMS>MS | F(1,162) = 0.04 p=0.85 | F(1,162) = 2.38 p=0.12 | F(1,223) = 14.37, p=0.0002; NMS>MS | F(1,325) = 3.83, p=0.05; NMS>MS | F(1,325) = 1.28, p=0.26 |
| Menthol dose main effect | F(2,85) = 2.58 p=0.08 | F(2,163) = 2.30, p=0.11 | F(2,85) = 4.57 p=0.01 HM>0M | F(2,85) = 40.87 p<0.0001; HM>LM>0M | F(2,223) = 0.84, p=0.43 | F(2,85) = 1.18, p=0.31 | F(2,85) = 0.79, p=0.46 |
| Nicotine dose main effect | F(2,105) = 15.06, p<0.001 HN>LN>0N | F(2,105) = 73.61, p<0.0001 HN>LN>0N | F(2,105) = 2.32 p=0.10 | F(2,105) = 3.14 p=0.05; HN>0N | N/A | F(4,209) = 2.85, p=0.02; B,PRE-HN>POST-HN | F(4,209) = 3.76, p=0.006; POST-LN, POST-0N, EP>POST-HN |
| Cigarette type * menthol dose | F(2,162)=0.19 p=0.83 | F(2,163) = 0.41, p=0.66 | F(2,162)=0.92 p=0.40 | F(2,162) = 0.50 p=0.61 | F(2,223) = 0.46, p=0.63 | F(2,325) = 1.05, p=0.35 | F(2,325) = 5.20, p=0.006; in MS, HM, LM>0M but no menthol dose effect in NMS |
| Cigarette type * nicotine dose | F(2,162) = 0.63, p=0.54 | F(2,163) = 7.95, p=0.0005 NM>M for HN, LN but not 0N | F(2,162) = 0.11 p=0.90 | F(2,162) = 0.16 p=0.85 | N/A | F(4,325) = 0.84, p=0.50 | F(4,325) = 0.78, p=0.54 |
| Menthol dose * nicotine dose | F(4,162) = 0.39, p=0.81 | F(4,163) = 1.86, p=0.12 | F(4,162) = 1.50 p=0.21 | F(4,162) = 1.71 p=0.15 | N/A | F(4,325) = 1.08, p=0.38 | F(8,325) = 0.43, p=0.90 |
| Cigarette-type * menthol dose * nicotine dose | F(4,162) = 1.74, p=0.14 | F(4,163) = 1.75, p=0.14 | F(4,162) = 2.47 p=0.05; for HN and LN but not 0N, menthol dose effect (HM>LM>0M) in NMS but not MS | F(4,162) = 0.51 p=0.73 | N/A | F(8,325) = 0.54, p=0.83 | F(8,325) = 1.57, p=0.13 |
| Session day | F(2,162) = 8.86, p=0.0002 1 st >2 nd , 3 rd | F(2,163) = 5.59, p=0.005 1 st >2 nd | F(2,162) = 9.68 p=0.0001; 1 st >2 nd , 3 rd | F(2,162) = 0.84 p=0.43 | F(2,223) = 4.27, p=0.02; 1 st >2 nd >3 rd | F(2,325) = 0.98, p=0.38 | F(2,325) = 1.76, p=0.17 |
| Infusion period | F(2,162) = 3.68, p=0.03 1 st >3 rd | F(2,163) = 0.85, p=0.43 | F(2,162) = 2.86 p=0.06 | F(2,162) = 1.03 p=0.36 | F(1,223) = 0.60, p=0.44 | N/A | N/A |

Cigarette type = preferred type of cigarettes (menthol vs. non-menthol) based on usual brand/type; MS = menthol-preferring smokers; NMS = non-menthol-preferring smokers; HN = high nicotine; LN = low nicotine; 0N = no nicotine (saline); HM = high menthol; LM = low menthol; 0M = no menthol. DEQ = Drug Effects Questionnaire; MNWS = Minnesota Nicotine Withdrawal Scale. BQSU = Brief Questionnaire on Smoking Urges; B = baseline; PRE-HN = pre-infusion for high nicotine; POST-HN = post-infusion for high nicotine; POST-LN = post-infusion for low nicotine; POST-0N = post-infusion for no nicotine (saline); EP = end point (following all infusions); N/A = not applicable (not included in tested model). Nicotine factor for DEQ ratings was a 3-level variable including the nicotine doses (0, low, high). Nicotine factor for BQSU had 5 levels (pre-nicotine infusion, dose during first, second and third infusion and post-infusion). The MNWS model did not include a within-subject effect of nicotine since the outcome was not evaluated at different nicotine levels within session. For the DEQ, the 'infusion period' factor refers to the order of saline or nicotine infusion conditions within a session, while for MNWS it refers to a contrast between baseline and end-point within the session. BQSU analyses did not include the infusion period factor.