Supplement of Geosci. Model Dev., 9, 2143–2151, 2016
http://www.geosci-model-dev.net/9/2143/2016/
doi:10.5194/gmd-9-2143-2016-supplement
© Author(s) 2016. CC Attribution 3.0 License.

Geoscientific Model Development
Open Access
EGU

Supplement of

Development of aroCACM/MPMPO 1.0: a model to simulate secondary organic aerosol from aromatic precursors in regional models

Matthew L. Dawson et al.

Correspondence to: Donald Dabdub (ddabdub@uci.edu)

The copyright of individual parts of the supplement might differ from the CC-BY 3.0 licence.

Table S1. Component species and surrogate structures of SOA groups in the original and updated CIT model. Surrogate species are indicated with a (*).

SOA Group	Original CIT Model	aroCACM/ MPMPO
A1	UR21	UR21*
	UR28*	UR28
A2	RP13	RP13
	RP17	RP17
	RP18*	RP18
	UR29	UR29
	UR30	UR30
	UR26	UR3*
A3	RPR9*	RPR9*
	RP12	RP12
A4	UR3*	UR26*
	UR23	UR23
	UR8	UR8
A5	UR17*	UR17*
	UR7	UR7
B1	AP1	AP1
	AP6*	AP6*
	UR31	UR31
B2	ADAC	ADAC
	RPR7*	RPR7*
	RP14	RP14
	RP19	RP19
	UR2	UR2
	UR14	UR14
	UR27	UR27
B3	AP10*	AP10*
	UR11	UR11
	UR15	UR15
B4	AP11	AP12*
	AP12*	
	UR20	
	UR34	
B5	AP8	AP8
	UR5	UR5
	UR6	UR6
	AP7*	AP7*
B6		AP11*
B7		UR20*
C1		UR75*
		UR24
		UR72
C2		UR77*
		RP98
		RPR4
		UR22
		UR66
		UR57
		UR58
		UR65
C3		PN11*
		PN12
		PN13
		PN14
C4		R102*
		UR76
C5		RP30*
		RP29
		RP31

Table S2. Domain and 24 hour average concentrations of aromatic-derived lumped SOA species C1 – C5 in the 30% each *m*-xylene and toluene scenario.

	Average (µg/m3)	**1 Standard Deviation (µg/m^3)**
C1	2.36E-01	4.24E-01
C2	3.54E-02	6.18E-02
C3	1.03E-01	1.30E-01
C4	9.42E-03	1.88E-02
C5	1.55E-02	2.00E-02