Supplementary Materials: Laminar Flame Characteristics of C1–C5 Primary Alcohol-Isooctane Blends at Elevated Temperature

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Table S1. *n*-Propanol-isooctane blends. Laminar flame speeds and Markstein lengths of alcohol-isooctane blends. T_u = 363 K, and P_u = 0.1 MPa.

	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.310	0.208		0	0.439	0.161
	0.2	0.325	0.161		0.2	0.455	0.144
ϕ = 0.8	0.4	0.334	0.162	**ϕ = 1.0**	0.4	0.466	0.133
	0.6	0.341	0.174		0.6	0.475	0.138
	0.8	0.360	0.143		0.8	0.482	0.113
	1	0.369	0.120		1	0.495	0.104
	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.430	0.105		0	0.189	−0.132
	0.2	0.444	0.075		0.2	0.208	−0.135
ϕ = 1.2	0.4	0.463	0.077	**ϕ = 1.5**	0.4	0.226	−0.104
	0.6	0.477	0.078		0.6	0.246	−0.092
	0.8	0.485	0.059		0.8	0.269	−0.079
	1	0.505	0.064		1	0.302	−0.044

Table S2. Methanol-isooctane blends. Laminar flame speeds and Markstein lengths of alcohol-isooctane blends. T_u = 363 K, and P_u = 0.1 MPa.

	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.310	0.208		0	0.439	0.161
	0.2	0.330	0.172		0.2	0.449	0.134
ϕ = 0.8	0.4	0.333	0.163	**ϕ = 1.0**	0.4	0.471	0.147
	0.6	0.359	0.153		0.6	0.495	0.114
	0.8	0.373	0.113		0.8	0.521	0.124
	1	0.387	0.099		1	0.553	0.111
	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.430	0.105		0	0.189	−0.132
	0.2	0.466	0.108		0.2	0.225	−0.065
ϕ = 1.2	0.4	0.487	0.101	**ϕ = 1.5**	0.4	0.247	−0.040
	0.6	0.515	0.091		0.6	0.288	0.016
	0.8	0.551	0.087		0.8	0.346	0.027
	1	0.615	0.101		1	0.443	0.100

Table S3. Ethanol-isooctane blends. Laminar flame speeds and Markstein lengths of alcohol-isooctane blends. T_u = 363 K, and P_u = 0.1 MPa.

	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.310	0.208		0	0.439	0.161
	0.2	0.329	0.177		0.2	0.445	0.143
ϕ = 0.8	0.4	0.341	0.176	**ϕ = 1.0**	0.4	0.463	0.125
	0.6	0.345	0.137		0.6	0.488	0.114
	0.8	0.356	0.117		0.8	0.501	0.092
	1	0.371	0.104		1	0.517	0.087
	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.430	0.105		0	0.189	−0.132
	0.2	0.456	0.104		0.2	0.209	−0.111
ϕ = 1.2	0.4	0.469	0.096	**ϕ = 1.5**	0.4	0.223	−0.052
	0.6	0.479	0.085		0.6	0.248	−0.038
	0.8	0.503	0.074		0.8	0.273	−0.021
	1	0.520	0.077		1	0.330	0.032

Table S4. *n*-Butanol-isooctane blends. Laminar flame speeds and Markstein lengths of alcohol-isooctane blends. T_u = 363 K, and P_u = 0.1 MPa.

	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.310	0.208		0	0.439	0.161
	0.2	0.318	0.180		0.2	0.446	0.140
ϕ = 0.8	0.4	0.334	0.168	**ϕ = 1.0**	0.4	0.457	0.137
	0.6	0.336	0.165		0.6	0.462	0.139
	0.8	0.341	0.167		0.8	0.472	0.126
	1	0.36	0.176		1	0.478	0.120
	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.430	0.105		0	0.189	−0.132
	0.2	0.441	0.078		0.2	0.199	−0.156
ϕ = 1.2	0.4	0.459	0.088	**ϕ = 1.5**	0.4	0.214	−0.146
	0.6	0.470	0.053		0.6	0.245	−0.137
	0.8	0.485	0.064		0.8	0.255	−0.104
	1	0.493	0.055		1	0.300	−0.058

Table S5. *n*-Pentanol-isooctane blends. Laminar flame speeds and Markstein lengths of alcohol-isooctane blends. T_u = 363 K, and P_u = 0.1 MPa.

	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.310	0.208		0	0.439	0.161
	0.2	0.328	0.160		0.2	0.447	0.138
ϕ = 0.8	0.4	0.328	0.163	**ϕ = 1.0**	0.4	0.460	0.134
	0.6	0.334	0.170		0.6	0.468	0.121
	0.8	0.340	0.167		0.8	0.469	0.121
	1	0.349	0.165		1	0.483	0.115
	$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm		$f_{v,alc}$	S_u^0/m·s^{-1}	L_b/cm
	0	0.430	0.105		0	0.189	−0.132
	0.2	0.451	0.106		0.2	0.200	−0.167
ϕ = 1.2	0.4	0.463	0.089	**ϕ = 1.5**	0.4	0.212	−0.124
	0.6	0.478	0.076		0.6	0.250	−0.041
	0.8	0.486	0.072		0.8	0.277	−0.048
	1	0.491	0.066		1	0.300	−0.051