

**Table S1: Evolution of haemoglobin oxygen saturation as a function of the FIO<sub>2</sub> and duration of the hypoxic phase.**

		Cycle 1		Cycle 2		Cycle 3		Cycle 4	
		15 s hypoxia	45 s normoxia	20 s hypoxia	40 s normoxia	30 s hypoxia	30 s normoxia	40 s hypoxia	20 s normoxia
<b>Latency (s)</b>	FIO <sub>2</sub> 12 %	3.61 ± 0.6	10.4 ± 0.9	3.99 ± 0.5	10.3 ± 0.8	4.58 ± 0.7	10.8 ± 1	4.81 ± 0.7	8.75 ± 1.4
	FIO <sub>2</sub> 9 %	3.2 ± 0.7	8.9 ± 0.9	4.7 ± 0.7	8.8 ± 0.9	2.9 ± 1	8.5 ± 0.9	4.6 ± 0.8	6.2 ± 1.7
	FIO <sub>2</sub> 6 %	2.3 ± 0.4	11.2 ± 0.7	2.7 ± 1.3	10.7 ± 1	2.9 ± 2	9.5 ± 0.9	5.9 ± 0.6	7.4 ± 1.5
<b>Time to peak (s)</b>	FIO <sub>2</sub> 12 %	21.78 ± 1*	38.6 ± 0.8 *	26.3 ± 1 *	33.63 ± 1.4 *	36.2 ± 0.9*	24 ± 1.1 *	43.9 ± 0.8*	11.2 ± 1.4*
	FIO <sub>2</sub> 9 %	20.7 ± 1*	40.8 ± 0.7 *	24.1 ± 1 *	34.1 ± 1.3 *	35.7 ± 1.1*	26.1 ± 0.9*	41.6 ± 1.7*	13.8 ± 1.7 *
	FIO <sub>2</sub> 6 %	23.9 ± 0.9*	36.5 ± 1.3 *	28 ± 1.3 *	32.2 ± 1.8 *	36.6 ± 2.3*	27.8 ± 1*	40.1 ± 2*	12.6 ± 1.5*
<b>Amplitude of change (%)</b>	FIO <sub>2</sub> 12 %	-19.9 ± 1.7 <sup>§</sup>	20.7 ± 1.6 <sup>§</sup>	-23.3 ± 2.7 <sup>§</sup>	22.9 ± 2.5 <sup>§</sup>	-24.8 ± 1.6 <sup>§</sup>	22.1 ± 2 <sup>§</sup>	-24.5 ± 2 <sup>§</sup>	11.25 ± 1.52† <sup>§</sup>
	FIO <sub>2</sub> 9 %	-28 ± 1.9 <sup>§</sup>	28.4 ± 2.1 <sup>§</sup>	-30.9 ± 2.3 <sup>§</sup>	30 ± 1.9 <sup>§</sup>	-32.6 ± 2.1 <sup>§</sup>	28.1 ± 2.2 <sup>§</sup>	-29.6 ± 2.2 <sup>§</sup>	17 ± 2.8† <sup>§</sup>
	FIO <sub>2</sub> 6 %	-41.5 ± 2.1 <sup>§</sup>	40.1 ± 2.2 <sup>§</sup>	-40.1 ± 1.9 <sup>§</sup>	36.7 ± 2.1 <sup>§</sup>	-39.4 ± 1.8 <sup>§</sup>	35.9 ± 2 <sup>§</sup>	-33.8 ± 3.3 <sup>§</sup>	16.1 ± 2.4† <sup>§</sup>

Saturation was measured during four consecutive cycles of 60 s during which the hypoxic phase was progressively lengthened (15, 20, 30 and 40 s). Latency, time to peak change and amplitude of change were measured in 7 animals (mean±se) at different FIO<sub>2</sub> (6, 9 and 12%). Comparisons were made using a one-way ANOVA followed by Newman-Keuls test. p <0,05 \* between each hypoxic phase duration, † between 40 s hypoxic phase and the others, § between each FIO<sub>2</sub>.