

**Table S3.** Subject-specific and overall performance for a selection of eight features (a) to (h) and hypothesis (H3) relative SV via subject-independent calibration. The performance between  $\Delta SV_{EIT}$  and  $\Delta SV_{Ref}$  is evaluated in terms of angular error  $\epsilon_\alpha$  and angular concordance rate CR. The ( $\dagger$ ) indicates unrealistic solutions with calibrations coefficients *not* having identical sign for all subjects. Cell shadings indicate whether the acceptance criteria (see methods section) are met (green), not met (red), or met but with unrealistic calibration coefficients (yellow).

(a) $\Delta\sigma_H$		(b) $tStd_H$		(c) $\Delta\sigma_L$		(d) $tStd_L$		
$\epsilon_{Abs}$ (mL)	$r(1)$							
S01	$7.0 \pm 22.0$	66.7	$-3.0 \pm 23.8$	100.0	$-17.5 \pm 4.5$	100.0	$-21.4 \pm 3.7$	100.0
S02	$-19.5 \pm 24.5$	77.8	$-32.9 \pm 14.0$	28.6	$-6.2 \pm 25.5$	63.6	$-14.1 \pm 18.7$	66.7
S03	$-24.7 \pm 8.5$	80.0	$-27.3 \pm 10.1$	60.0	$-35.2 \pm 6.4$	20.0	$-31.7 \pm 6.7$	60.0
S04	$3.4 \pm 21.5$	88.9	$-1.0 \pm 23.9$	88.9	$-10.5 \pm 16.0$	100.0	$-15.3 \pm 17.2$	100.0
S05	$-7.0 \pm 18.4$	83.3	$1.1 \pm 19.9$	100.0	$-11.5 \pm 22.5$	80.0	$-23.1 \pm 12.1$	50.0
S06	$-18.2 \pm 28.3$	63.6	$-10.7 \pm 33.4$	61.5	$-7.6 \pm 20.6$	75.0	$-19.1 \pm 13.5$	66.7
S08	$-22.2 \pm 11.5$	80.0	$-12.2 \pm 11.5$	100.0	$-18.4 \pm 14.4$	50.0	$-23.3 \pm 11.5$	40.0
S09	$14.8 \pm 15.8$	80.0	$18.5 \pm 12.7$	80.0	$-16.4 \pm 3.4$	100.0	$-16.4 \pm 4.0$	100.0
S10	$17.9 \pm 18.6$	77.8	$19.9 \pm 17.7$	66.7	$-2.6 \pm 24.8$	75.0	$2.7 \pm 24.0$	80.0
All	$-5.3 \pm 25.2$	76.9	$-4.9 \pm 26.5$	73.8	$-12.1 \pm 20.3$	70.4	$-17.4 \pm 16.7$	70.2

  

(e) $tStd_G$		(f) $\Delta\sigma_H, \frac{\Delta\sigma_H}{\sigma_G}$		(g) $\Delta\sigma_L, \frac{\Delta\sigma_L}{\sigma_G}$		(h) $V_T$		
$\epsilon_{Abs}$ (mL)	$r(1)$	$\epsilon_{Abs}$ (mL)	$r(1)$	$\epsilon_{Abs}$ (mL)	$r(1)$	$\epsilon_{Abs}$ (mL)	$r(1)$	
S01	$-22.8 \pm 0.1$	100.0	$9.1 \pm 8.5$	100.0	$9.6 \pm 8.2$	100.0	$16.9 \pm 8.1$	100.0
S02	$-21.1 \pm 7.7$	85.7	$-6.4 \pm 14.9$	88.9	$-4.3 \pm 15.9$	100.0	$-9.3 \pm 11.7$	88.9
S03	$-19.9 \pm 7.7$	100.0	$-26.0 \pm 2.3$	100.0	$-23.3 \pm 3.3$	100.0	$-27.4 \pm 7.2$	40.0
S04	$-23.7 \pm 5.9$	100.0	$10.6 \pm 14.0$	87.5	$6.4 \pm 14.3$	85.7	$-2.7 \pm 15.8$	100.0
S05	$-22.1 \pm 11.4$	50.0	$-11.9 \pm 4.6$	100.0	$0.6 \pm 26.7$	83.3	$-15.7 \pm 3.1$	100.0
S06	$0.6 \pm 45.7$	50.0	$2.7 \pm 20.6$	83.3	$5.4 \pm 20.2$	84.6	$2.1 \pm 17.7$	92.3
S08	$-26.0 \pm 9.1$	40.0	$-29.3 \pm 9.9$	40.0	$-35.0 \pm 12.1$	40.0	$-4.0 \pm 15.0$	100.0
S09	$-14.4 \pm 2.0$	100.0	$0.1 \pm 12.9$	100.0	$-3.0 \pm 14.0$	100.0	$-10.4 \pm 7.9$	100.0
S10	$-16.0 \pm 2.0$	100.0	$16.1 \pm 19.3$	75.0	$13.4 \pm 20.6$	71.4	$21.2 \pm 13.5$	85.7
All	( $\dagger$ ) $-15.6 \pm 25.7$	73.3	$-1.9 \pm 20.4$	83.9	$-1.7 \pm 21.7$	84.2	$-1.5 \pm 18.5$	89.8