

**Table 33A-8-001.** RbH<sub>2</sub>AsO<sub>4</sub> (RDA), RbD<sub>2</sub>AsO<sub>4</sub> (DRDA). Thermodynamic parameters.  $\Delta P_s$ : jump of spontaneous polarization at  $\Theta_f$ .

Substance	$C$ [K]	$\Theta_p$ [K]	$\Delta P_s$ [ $\cdot 10^{-2} \text{ C m}^{-2}$ ]	$\xi$ [ $\text{V m}^5 \text{ C}^{-3}$ ]	$\zeta$ [ $\text{V m}^9 \text{ C}^{-5}$ ]	Ref.
RDA		108.5	3.7	$-1.62 \cdot 10^{11}$	$8.7 \cdot 10^{13}$	74Zhe
RDA	3100	108.5	3.6	$-5.6 \cdot 10^{10}$	$3.2 \cdot 10^{13}$	74Kam
RDA	2200	104	3.0	$-1.35 \cdot 10^{12}$	$1.12 \cdot 10^{15}$	93Pin
DRDA	3500	156	4.5	$-7.6 \cdot 10^{11}$	$2.8 \cdot 10^{14}$	93Pin

**Table 33A-8-002.** RbH<sub>2</sub>AsO<sub>4</sub> (RDA), RbD<sub>2</sub>AsO<sub>4</sub> (DRDA). Elastic compliances  $s_{\lambda\mu}$  at 25 °C [69Adh1].

Crystals	$s_{11}$	$s_{12}$	$s_{13}$	$s_{33}$	$s_{44}$	$s_{66}$	$T$
	[ $\cdot 10^{-12} \text{ m}^2 \text{ N}^{-1}$ ]						[°C]
RbH <sub>2</sub> AsO <sub>4</sub>	22.8	8.5	-1.8	25.4	96.0	232.0	25
RbD <sub>2</sub> AsO <sub>4</sub>	24.7	10.1	-4.4	27.1	105.5	246.0	

**Table 33A-8-003.** RbH<sub>2</sub>AsO<sub>4</sub> (RDA).  $n_o$ ,  $n_e$  with respect to air [87Kir].  $T = 33.0(4)^\circ\text{C}$ . IF: narrow-band interference spectrometer.

$\lambda$ [Å]	Source	$n_o$	$n_e$
4046.56	Hg	1.57882	1.53880
4358.33	Hg	1.57344	1.53421
4678.15	Cd	1.56906	1.53052
4799.91	Cd	1.56761	1.52932
5085.82	Cd	1.56460	1.52678
5460.74	Hg	1.56134	1.52410
5893.0	Na	1.55827	1.52162
6438.47	Cd	1.55512	1.51923
7800.27	Rb	1.54926	1.51511
7947.60	Rb	1.54872	1.51476
8521.13	Cs	1.54674	1.51360
8943.46	Cs	1.54541	1.51285
10640.00	Xe	1.54052	1.51047
	+ IF		

**Table 33A-8-004.** RbD<sub>2</sub>AsO<sub>4</sub> (DRDA).  $n_o$ ,  $n_e$  with respect to air [87Kir].  $T = 33.0(4)$  °C. IF: narrow-band interference spectrometer.

$\lambda$ [Å]	Source	$n_o$	$n_e$
4046.56	Hg	1.57325	1.53690
4358.33	Hg	1.56806	1.53231
4678.15	Cd	1.56388	1.52861
4799.91	Cd	1.56252	1.52745
5085.82	Cd	1.55977	1.52498
5460.74	Hg	1.55663	1.52232
5790.66	Hg	1.55457	1.52054
6438.47	Cd	1.55097	1.51756
7800.27	Rb	1.54591	1.51356
7947.60	Rb	1.54538	1.51320
8521.13	Cs	1.54384	1.51210
8943.46	Cs	1.54286	1.51134
10640.00	Xe	1.53927	1.50917
+ IF			

**Table 33A-8-005.** RbH<sub>2</sub>AsO<sub>4</sub> (RDA), RbD<sub>2</sub>AsO<sub>4</sub> (DRDA). Electrooptic constants.

	$r_{63}^T$ [ $\cdot 10^{-12}$ m V <sup>-1</sup> ]	$T$ [°C]	$\lambda$ [nm]	Ref.
RDA	13.0(2)	RT	546	64Ott
	14.8	RT	550	69Adh2
DRDA	21.4	RT	550	69Adh2

**Table 33A-8-006.** RbH<sub>2</sub>AsO<sub>4</sub> (RDA), RbD<sub>2</sub>AsO<sub>4</sub> (DRDA). Superhyperfine (shf) coupling of <sup>85</sup>Rb and <sup>87</sup>Rb obtained from ESR and ENDOR [94Kah].  $A_c$ : shf coupling along the  $c$  axis. The subscripts l and s for Rb denote the larger and the smaller shf couplings, respectively.

	$T$ [K]	$A_c(^{87}\text{Rb}_l)$ <sup>a)</sup> [MHz]	$A_c(^{87}\text{Rb}_s)$ <sup>b)</sup> [MHz]	$A_c(^{85}\text{Rb}_l)$ <sup>a)</sup> [MHz]	$A_c(^{85}\text{Rb}_s)$ <sup>b)</sup> [MHz]
DRDA	144	66.4	8.8	19.9	2.7
RDA	180	65.3	8.7	19.6	2.6
RDA	300 <sup>c)</sup>	61.3	8.2	18.4	2.5
DRDA	320 <sup>c)</sup>	61.1	8.1	18.3	2.4

<sup>a)</sup> ENDOR experiments.<sup>b)</sup> ESR experiments and simulations.<sup>c)</sup> Linear extrapolation of the low-temperature shf values.

**Table 33A-8-007.** RbH<sub>2</sub>AsO<sub>4</sub>:Tl<sup>2+</sup>. Principal values and direction cosines of  $g$  and  $A$  tensors from ESR measurements [90Nev].  $x, y, z$ : principal axes of tensor ellipsoids.

		Principal values		Direction cosines ( $\lambda, \mu, \nu$ )
		$g$	$A$ [MHz]	
149 K	$x$	1.994	104990	(1, 0, 0)
	$y$	1.994	104990	(0, 1, 0)
	$z$	1.985	104220	(0, 0, 1)
25 K	$x$	1.991	102088	(0.879, -0.377, -0.294)
	$y$	1.998	102867	(0.387, -0.922, -0.025)
	$z$	1.984	101436	(0.280, -0.092, 0.956)