The Thermochemical Measurements on Rubidium Compounds: A Comparison of Measured Values with Those Predicted from the NBS Tables of Chemical and Thermodynamic Properties

V. B. Parker, W. H. Evans,[a] and R. L. Nuttall

Center for Chemical Physics, National Bureau of Standards, Gaithersburg, MD 20899

Received February 4, 1986; revised manuscript received October 29, 1986

This report presents the assessed thermochemical measurements on rubidium compounds upon which the property values, $\Delta_f H°$, $\Delta_f G°$, $S°$, $C_p°$, and $H°(T)-H°(0)$ at 298.15 K and $\Delta_f H°(0\ K)$ recommended in the "NBS Tables of Chemical Thermodynamic Properties" are based. Included in this set of thermochemical measurements, or thermochemical reaction catalog, is a comparison of the observed values for the processes in question with those predicted (calculated) from the recommended property values in the forementioned tables. The evaluator's initially assigned uncertainties on the experimental measurements and final estimated reliabilities on the recommended process values are given. This paper illustrates the evaluation procedure used in preparing the full set of recommended data in the "NBS Tables of Chemical Thermodynamic Properties".

Key words: data evaluation; documentation; enthalpy; entropy; Gibbs energy; NBS Thermochemical Tables; rubidium compounds; reaction catalog; thermochemical measurements.

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1. Introduction

This report on the thermochemical measurements of rubidium compounds is intended to document the selections of the thermochemical property values, $\Delta_f H°$, $\Delta_f G°$, $S°$, $C_p°$, and $H°(T)-H°(0)$ at 298.15 K and $\Delta H°(0)$ in SI units, recommended in the "NBS Tables of Chemical Thermodynamic Properties"[1] and the earlier Technical Note 270 Series, "Selected Values of Chemical Thermodynamic Properties"[2] in kcal/mol at one atmosphere pressure; this report covers the available literature through 1978.

The documentation is provided as a "computer readable" reaction catalog of all known thermochemical measurements, reduced to 298.15 K, that were considered in the evaluation. An introductory guide (Table 1) provides an index to the reaction catalog (Table 2) showing which reactions are definitive for the properties of each substance. Table 2 also contains a comparison of each of the listed measurement values with those predicted (calculated) from the recommended property values.[1,2] An initial or preliminary uncertainty assigned by the evaluator is given for each measurement. In addition,

[a] Deceased.

the final estimated reliability for the predicted value is given. A reference citation and commentary on the measurement where appropriate complete the entry for each measurement.

Also included are some additional or revised property values for three rubidium compounds (Table 3), and auxiliary data (Table 4) used in the calculations that are not explicitly contained in the NBS Tables.[1,2]

The tables and discussion in this paper illustrate the type of information considered and the evaluation process used in the selection of the recommended values for the full data base presented in the NBS Tables.

In addition, these Tables serve several other purposes. The users of the catalog can judge whether or not the analysis for any compound is based on a comprehensive set of the existing useful measurements and how well defined the values of the properties of each compound are and how well defined the values of the processes involving it are. It also shows the interrelationships among the compounds and essentially provides a "road map" or guide to the "key network". Hopefully, it should also encourage measurements in those areas that are not well defined, i.e., where reliable data are insufficient or lacking to define well the properties of a compound, or to confirm the value for a process. In addition, as has been described by Garvin *et al.*,[3,4] this catalog will serve as the basis for future evaluations, when sufficient newer information becomes available and/or when different auxiliary data are used. An example of this latter approach is the publication by Wagman *et al.*[5] in which the 1977 CODATA selections[6] are used.

Users of this reaction catalog are invited to comment on the reactions and the interpretations, correct errors, and bring new measurements to our attention.

2. The Types of Measurements Listed in the Catalog

The reaction catalog (Table 2) contains the set of enthalpy, Gibbs energy, and entropy changes at 298.15 K as well as entropies at 298.15 K from low temperature C_p measurements or statistical calculations which were obtained or derived in assessing the thermochemistry of rubidium compounds.

Many of the enthalpy measurements are from calorimetric determinations, i.e., combustion, decomposition, solution reactions. For the Gibbs energy changes, many are from equilibrium constants, emf measurements, and solubility together with activity coefficient work. A more complete list of measurement types can be found in Garvin *et al.*[3,4]

They have been obtained from the original articles. The original data were corrected where possible for differences in energy units, molar masses, temperature, etc., and to standard state conditions, using consistent values for all auxiliary quantities. Where necessary, reinterpretation of the chemistry was made.

3. Conventions and Energy Units

A full discussion of the conventions, energy units, molar masses, methods of evaluation, and definitions used in this report are to be found in the "NBS Tables of Chemical Thermodynamic Properties."[1] All auxiliary thermodynamic property values used are taken from this publication or interpolated from the values contained in it. Those that are interpolated are listed in Table 4 and may be considered to be part of the NBS Tables.

The catalog of thermochemical measurements on rubidium compounds (Table 2) was originally assembled using values in thermochemical calories and at one atmosphere standard state pressure.[2] These values were converted to SI units as described[1]; the same number of decimal places are retained as in the calorie catalog; however, the residual, given in the column labeled RESID (OBS–CALC), (See Section 5.2.a. for the definition) has been calculated from all values in calories and then converted to kJ at 1 bar and is unrounded (maximum of three decimals). As such, it may differ (insignificantly) from that calculated from the catalog entry in kJ and the selected property values in the NBS Tables.[1]

4. The General Arrangement of Compounds and Reactions

The compounds listed in Table 1, the Index to the compounds and their reactions are arranged (in general) in the standard order of arrangement by the principle of latest position.[1,2] The reactions in the reaction catalog itself, Table 2, are also listed in the standard order of arrangement, also using the rules given for compounds within an element, for the rubidium compound with the highest finding number. All reactions are numbered sequentially.

5. Contents and Descriptions of the Tables

5.1. Table 1. Index to the Compounds and Their Reactions

The contents are:

1. Formula for each compound for which a property value, $\Delta_f H°$, $\Delta_f G°$, or $S°$ has been selected from the measurements in the reaction catalog. The parenthetical expression at the right-hand end of a chemical formula shows the physical state of, or the medium containing the compound.
2. Molar mass for each compound.
3. A list of the reaction numbers referring to their reactions in the catalog of measurements which contain the compound and were important in the selection of the property value of that compound. Reactions not considered (for information only), and reactions which can not be solved because the

necessary property values are unknown are not listed in this table under the rubidium compounds they contain. However, these reactions are given in Table 2, are labeled appropriately, and can be found by inspection. See Secs. 4 and 5.2 for further information. A side chain reaction, that is, a reaction that uniquely defines a property of a compound, is listed only under the rubidium compound for which it is used to define the property. This reaction will not be listed under the other rubidium compound(s) it contains. An example of sequential side chains is the following:

> Reaction No. 8 is listed under compound $Rb^{+2}(g)$ although reaction No. 9 contains the compound. Reaction 9 is listed under $Rb^{+3}(g)$. In sequence, $Rb^{+3}(g)$, $Rb^{+2}(g)$, $Rb^{+}(g)$ trace back to Rb(g).

5.2. Table 2. The Catalog of the Thermochemical Measurements at 298.15 K

5.2.a. Contents

Table 2 contains the following:

1. An index number for each reaction, referred to in Table 1.
2. A statement of the chemical process, with the products to the right of the equals sign. The formula of a substance is given in place of a reaction when the absolute entropy of that substance is the property cited.
3. The identification of the property (ΔH, ΔG, ΔS, or S).
4. The process value and its uncertainty as initially assigned by the evaluator. The energy units are kJ/mol for ΔH and ΔG and J/(mol K) for S and ΔS for the number of significant digits believed to be appropriate. See Sec. 5.2.b for discussion of assigned uncertainties.
5. The residual or difference between the measured value for the process and that derived from the recommended property values, shown as RESID(OBS–CALC). This residual indicates more than a comparison; it shows the evaluators judgement in selecting and weighting the data. A small residual indicates high weight, in general, for the datum.
6. The predicted or estimated reliability of the recommended or calculated value for the process given as EST.REL. See Sec. 5.2.c. for a discussion of this.
7. A brief reference code consisting of the year of publication and the first three letters of the first two authors' names. Complete references in chronological order are given in Sec. 10. Those codes designated "NBS" specify calculations at NBS performed in the course of the evaluation and are not listed in the references.
8. Commentary on the measurement. These may indicate corrections applied, original temperature measured, original experimental conditions, etc.
9. Special Statements. In addition, some reactions may carry one of the following messages.

   a. CONSTRAINT - SOLVED EXACTLY
   This message occurs with reactions with values the evaluator felt should be held constant, i.e., not subject to adjustment or modification in the evaluative procedure. In general, these are usually smoothed enthalpy of dilution values, third law well defined entropies, or pre-evaluated (in a separate evaluation) processes.

   b. FOR INFORMATION ONLY
   This accompanies reactions with values the evaluator, after initial consideration, has rejected and given no weight in the evaluation. An explanation for its rejection may be given.

   c. NO SOLUTION FOR VARIABLE OR DATA MISSING.
   For a few reactions, the needed property values for two of the substances are not known so that the RESID cannot be calculated.
10. Thermodynamic Conventions. In addition to the experimental processes and the statistics on them, thermodynamic constraint relationships are given. There are two types.

    The first is the sum of the ions, for which $\Delta H°$, $\Delta G°$, and $\Delta S°$ all equal zero. An example is:

    $$Rb^{+}(ao)+Cl^{-}(ao) = RbCl(ai).$$

    The second is the *HGS* relationship, $\Delta H-\Delta G-T\Delta S=0$, which must be satisfied for each reaction and compound. An important type is the formation reaction which occurs as, e.g.,

    $$Rb(cr)+0.5Cl_2(g)=RbCl(cr)$$

    with an abbreviated designation HGS=0.

5.2.b. Assigned Uncertainties

As part of the assessment and evaluation of each reaction or process an *initial* uncertainty is assigned. This preliminary uncertainty is the evaluator's prior assessment of the quality of that particular reaction measurement, taking into account the experimental technique used, the details given, the number of measurements, the standard deviation, the magnitude of the corrections to 298.15 K, the inherent error in the methods used, the reliability of previous work of the investigators, etc.

This preliminary uncertainty may or may not agree with the experimentalist's appraisal which it supersedes, or be the traditional 2δ. In the next step of the evaluation procedure, the rationalization of the property values of a substance from the various measurement paths and from replicate measurements of the same path, however, this initial judgement of uncertainty on a particular measurement may prove to be unrealistic. The user is cautioned not to rely on this initial uncertainty as an accurate measure of the reliability of that experimental process value or of the recommended value, but to use the estimated reliability on the predicted or calculated process value for an estimate of the reliability of the recommended value for the process. A separate discussion follows.

5.2.c. Estimated Reliability

The estimated reliability is the evaluator's *final* judgement as to quality of the *predicted* process value calculated from the recommended property values, $\Delta_f H°$, $\Delta_f G°$, and $S°$ for each substance in the reaction; it is not computer generated. It is based on the following: the evaluator's *initial*, assigned, uncertainty on the experimental process value, the residual, i.e., the OBS–CALC, the number of replicate measurements and the above cited uncertainties and residuals on the replicate reactions, as well as these factors on all reactions involving each particular compound of interest in the reaction at hand. The predicted or estimated reliability on the calculated process value may be derived indirectly, from the estimated reliability of two or more other reactions that may be well defined and can be combined to obtain the reaction in question. It should be pointed out here, that the implied uncertainties on the selected property values[1,2] are not used or needed for most reactions listed here. The calculation of the uncertainty or estimated reliability on the predicted process value by the usual rule of calculating the uncertainty of a process (as the square root of the sum of the squares of all the uncertainties in the properties of the substances in the process) will result in a predicted reliability for the process value that is too large, since the uncertainty on a property value incorporates the uncertainties on the process values from which all the property values are derived.

In summary, the estimated reliability at present is the evaluator's best judgement of the reliability of the predicted process value. This estimate is expressed in one of three different ways, as a numerical value in kJ/mol, or as categories "a" and "b". Category "a" means the numerical value given for the uncertainty on the observed value initially assigned by the evaluator is recommended as the estimated reliability of the calculated or recommended process value. Category "b" is used only for replicate measurements of a specific process by different investigators; the estimated reliability is given either as "a" or as a numerical value for only one, usually the first, of a series of replicate measurements. If category "b" is used for the first of the series a replicate in close proximity to this reaction will contain the appropriate estimated reliability.

There are some reactions where no estimated reliability is given; these reactions have no solution at present, but in addition, are isolated measurements with no replicates which would confirm the measurement value. For these measurements, the user is advised to be conservative in his acceptance and use of the process value and to use at least twice the initial assigned uncertainty on the observed value for an estimate of its reliability.

5.3. Table 3. Revisions and Additions to the NBS Tables

This table contains revisions and additions to the NBS Tables[1,2] for three rubidium compounds that have been made since their publication.

5.4. Table 4. Auxiliary Data Used in the Calculations Interpolated from the NBS Tables

Values for all non rubidium species used as auxiliary data in the calculation of the property values of rubidium compounds and in the calculation of the predicted process values are also obtained directly from the NBS Tables[1,2] or interpolated from them. Those not contained in them are given in Table 4 and may be considered to be part of the NBS Tables.[1,2]

6. Acknowledgements

The continuing support of the Office of Standard Reference Data is gratefully acknowledged.

We thank C. R. Jackson and D. Cockrell for their editorial assistance.

7. References in the Text

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[2] D. D. Wagman, W. H. Evans, V. B. Parker, R. H. Schumm, and R. L. Nuttall, "Selected Values of Chemical Thermodynamic Properties", Nat. Bur. Stand. (U. S.) Tech. Note 270–8 (1981).

[3] D. Garvin, V. B. Parker, D. D. Wagman, and W. H. Evans, "A combined Least Sums and Least Squares Approach to the Evaluation of Thermodynamic Data Networks", Nat. Bur. Stand. (U. S.) NBSIR 76–1147, 37 pp. (1976).

[4] D. Garvin, V. B. Parker, D. D. Wagman, and W. H. Evans, "A Combined Least Sums and Least Squares Approach to the Evaluation of Thermodynamic Data Networks", Proc. 5th Int'l CODATA Conf., Pergamon Press, pp. 567–575 (1977).

[5] D. D. Wagman, R. H. Schumm, and V. B. Parker, "A Computer Assisted Evaluation of the Thermochemical Data of the Compounds of Thorium", Nat. Bur. Stand. (U. S.) NBSIR 77–1300, 93 pp. (1977).

[6] J. D. Cox, Chairman, CODATA Task Group on Key Values for Thermodynamics, "CODATA Recommended Key Values for Thermodynamics 1977", CODATA Bull. No. 28 (1978).

8. Glossary of Symbols and Terminology in the Tables

All symbols and terminology used in these tables are contained and described in the "NBS Tables of Chemical Thermodynamic Properties" (Ref. 1, Sec. 7). For convenience, however, some of the more uncommon physical state and solution designations are given here, as well as some summary definitions of the column headings.

8.1. Physical State and Solution Designations

aq	aqueous solution, concentration not specified.
ai	aqueous standard state of a completely ionized electrolyte (the sum of the values for the ions).
ao	aqueous standard state of the species as written, i.e., undissociated.
:x	standard state, mole fraction = 1, non-aqueous and mixed solutions (suffix in description of the state, as in $I_2(CCl_4{:}x)$).

:s	standard state, molality = 1, non-aqueous and mixed solutions, as in $I_2(CCl_4$:s).
D	partial molar property (prefix in the description of the state as in "HCl(D:100H_2O)").
:u	non-aqueous, mixed or multicomponent aqueous soultions, concentration not specified.
cr2,g2, etc.	This designation is used to distinguish various crystalline forms and isomers.

8.2. Column Headings in Table 2

PROP. MEAS.	The thermodynamic property, ΔH, ΔG, ΔS, and S ascribed to the measured or stated reaction.
OBSVD. VALUE	The observed or stated numeric value for the property of that particular reaction.
INIT. UNC.	Initial uncertainty, originally assigned by the evaluator.
RESID(OBS–CALC)	The residual or difference between the observed value for the process and that calculated from the recommended property values (Ref. 1, Sec. 7).
EST. REL.	The estimated reliability of the value predicted from the recommended property values (Ref. 1, Sec. 7). This is the evaluator's final judgement.
REF.	The reference code. The complete reference is given in Sec. 10.

9. Tables

Table 1. Index to the Compounds and Their Reactions

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
Rb(cr)	85.4678	1
Rb(g)	85.4678	3 31 32 477 477 477 2
Rb+(g)	85.4678	7
Rb+2(g)	85.4678	8
Rb+3(g)	85.4678	9
Rb+(ao)	85.4678	228 234 422 425 428 429 431 432 434 435 437 438 443 444 452 453 455 460 463 466 423 424 426 427 430 433 436 439 442 445 446 448 449 450 451 454 457 459 462 464 465 467 468 478 478 478 199 200 354 355 440 441 447 458 461 469 470
Rb(185Hg)	85.4678	13 14
RbO2(cr)	117.4666	28
Rb2O(cr)	186.9350	27
Rb2O(g)	186.9350	29
Rb2O2(cr)	202.9344	23
RbH(cr)	86.4758	33
RbOH(cr)	102.4752	34
RbOH(g)	102.4752	31 32
RbOH(ai)	102.4752	20 22 207 422 423 424
RbOH(75H2O)	102.4752	16
RbOH(100H2O)	102.4752	17
RbOH(147H2O)	102.4752	17a 256
RbOH(200H2O)	102.4752	18
RbOH:H2O(cr)	120.4906	35
RbOH:2H2O(cr)	138.5060	36
(RbOH)2(g)	204.9504	37
RbF(cr)	104.4662	38 39 40 41 42 44 45 65 260
RbF(g)	104.4662	38 39 40 41 42 44 67 68 479 479 479 43
RbF(ai)	104.4662	62 369 371 425 426 427

Table 1. Index to the Compounds and Their Reactions - Continued

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
RbF(100H2O)	104.4662	45 62 64 70
RbF(150H2O)	104.4662	61
RbF(200H2O)	104.4662	60
RbF(300H2O)	104.4662	59
RbF(400H2O)	104.4662	58
RbF(500H2O)	104.4662	57
RbF(600H2O)	104.4662	56
RbF(800H2O)	104.4662	55
RbF(1000H2O)	104.4662	54
RbF(1500H2O)	104.4662	53
RbF(2000H2O)	104.4662	52
RbF(3000H2O)	104.4662	51
RbF(5000H2O)	104.4662	5
RbF(10000H2O)	104.4662	49
RbF(20000H2O)	104.4662	48
RbF(50000H2O)	104.4662	47
RbF(100000H2O)	104.4662	46
RbF:1.5H2O(cr)	131.4893	64 65
RbF(HCONH2:s)	104.4662	63
Rb2F2(g)	208.9324	67 68 480 480
		480 66
RbHF2(cr)	124.4726	481 481 481 69
		70
RbCl(cr)	120.9208	71 73 75 79
		80 81 84 85
		86 88 90 94
		95 96 100 101
		102 103 104 105
		106 107 116 316
		340 365 367 378
		387 388 389 419
		420 482 482 482
		301 302 304
RbCl(g)	120.9208	73 75 79 80
		81 84 85 86
		88 90 113 115
		483 483 483 72
RbCl(ai)	120.9208	13 14 94 95
		98 99 100 101
		102 103 104 105
		106 107 339 346
		379 428 429 430
RbCl(400H2O)	120.9208	97
RbCl(1000H2O)	120.9208	96 98 347
RbCl(2500H2O)	120.9208	99 315
RbCl(50HCOOH)	120.9208	108
RbCl(HCONH2:s)	120.9208	109
RbCl(HCONHCH3:s)	120.9208	110
RbCl(C4H8O2:s)	120.9208	112
RbCl(CH3OH:u)	120.9208	111

Table 1. Index to the Compounds and Their Reactions - Continued

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
Rb2Cl2(g)	241.8416	113 115 116 484 484 484 484 114
RbClO3(cr)	168.9190	117 118 119 485 485 485
RbClO3(ai)	168.9190	118 119 431 432 433
RbClO4(cr)	184.9184	120 121 122 123 124 486 486 486
RbClO4(ai)	184.9184	120 121 122 123 124 434 435 436
RbClO4(HCONH2:s)	184.9184	128
RbClO4(HCONHCH3:s)	184.9184	127
RbClO4(HCON(CH3)2:s)	184.9184	126
RbClO4(CH3CON(CH3)2:s)	184.9184	129
RbClO4(C4H8SO2:u)	184.9184	125
RbBr(cr)	165.3768	130 133 134 135 136 139 140 141 142 143 144 145 147 148 194 195 487 487 487
RbBr(g)	165.3768	133 134 135 136 488 488 488 131
RbBr(ai)	165.3768	139 140 141 142 143 144 145 437 438 439
RbBr(1000H2O)	165.3768	138
RbBr(HCONH2:s)	165.3768	146
RbBr3(cr)	325.1948	147 148
Rb2Br2(g)	330.7536	132
RbBrO3(cr)	213.3750	490 490 490 151 152
RbBrO3(ai)	213.3750	442 151 152 440 441
RbBrCl2(cr)	236.2828	154
RbBr2Cl(cr)	280.7388	156
RbI(cr)	212.3722	157 160 161 162 163 164 166 167 168 169 171 175 176 177 180 181 182 184 225 226 227 335 493 493 493 336
RbI(g)	212.3722	160 161 162 163 164 166 494 494 494 158
RbI(ai)	212.3722	167 168 169 170 443 444 445
RbI(2000H2O)	212.3722	170 171
RbI(1000NH2CH2CH2NH2)	212.3722	178
RbI(CH3CONHCH3:s2)	212.3722	174
RbI(HCONH2:s)	212.3722	179
RbI(HCONHCH3:s)	212.3722	173
RbI(HCON(CH3)2:s)	212.3722	175 176 177

Table 1. Index to the Compounds and Their Reactions - Continued

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
RbI(CH3CN:u)	212.3722	172
RbI3(cr)	466.1810	180 181 182 184 495 495 495
Rb2I2(g)	424.7444	159
RbIO3(cr)	260.3704	187
RbIO3(ai)	260.3704	446 448 447
RbICl2(cr)	283.2782	188
RbICl4(cr)	354.1842	189
RbIBr2(cr)	372.1902	194 195
RbIBrCl(cr)	327.7342	196
Rb2S(cr)	202.9996	198
Rb2S(ai)	202.9996	449 450 451
Rb2S(500H2O)	202.9996	197
RbS2O8-(ao)	277.5910	499 499 499 199 200
Rb2SO4(cr)	266.9972	203 205 206 208 500 500 500
Rb2SO4(g)	266.9972	204
Rb2SO4(ai)	266.9972	205 206 208 209 452 453 454
Rb2SO4(500H2O)	266.9972	207 209
Rb2SO4(800H2O)	266.9972	210
Rb2SO4(1000H2O)	266.9972	211
Rb2SO4(1500H2O)	266.9972	212
Rb2SO4(2000H2O)	266.9972	213
Rb2SO4(3000H2O)	266.9972	214
Rb2SO4(5000H2O)	266.9972	215
Rb2SO4(10000H2O)	266.9972	216
Rb2SO4(20000H2O)	266.9972	217
Rb2SO4(50000H2O)	266.9972	218
Rb2SO4(100000H2O)	266.9972	219
Rb2SO4(200000H2O)	266.9972	220
Rb2SO4(500000H2O)	266.9972	221
RbHS(cr)	118.5398	202
RbHS(500H2O)	118.5398	201
RbHSO4(cr)	182.5374	223
RbHSO4(400H2O)	182.5374	222
RbSO2F(cr)	168.5290	224
RbI:3SO2(cr)	404.5606	225 226 227
Rb2SeO3(cr)	297.8938	228 229
Rb2SeO4(cr)	313.8932	230
Rb2SeO4(aq)	313.8932	231
RbHSe(cr)	165.4358	232
RbHSe(ai)	165.4358	234
RbHSe(aq)	165.4358	233
Rb2TeO3(cr)	346.5338	235
Rb2TeO3(6000H2O)	346.5338	236
Rb2TeO3:H2O(cr)	364.5492	237
Rb2TeO3:3H2O(cr)	400.5800	238
Rb2TeBr6(cr)	777.9596	239
RbN3(cr)	127.4879	240
RbN3(ai)	127.4879	456
RbN3(aq)	127.4879	241

Table 1. Index to the Compounds and Their Reactions - Continued

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
RbNO2(cr)	131.4733	242
RbNO2(ai)	131.4733	457 459 458
RbNO3(cr)	147.4727	252 253 502 502 502 251
RbNO3(ai)	147.4727	247 249 252 253 460 462 251 461
RbNO3(130H2O)	147.4727	245
RbNO3(135H2O)	147.4727	244
RbNO3(200H2O)	147.4727	246
RbNO3(400H2O)	147.4727	229 247
RbNO3(1000H2O)	147.4727	248
RbNO3(3200H2O)	147.4727	249 409 410
RbNO3(5000H2O)	147.4727	250
RbNO3(6000H2O)	147.4727	192
RbPO3(cr)	164.4398	258
RbH2PO4(cr)	182.4552	255 256
Rb2H2P2O7(cr)	346.8950	257
RbPF6(cr)	230.4320	503 503 503 259 260
RbSb(cr)	207.2178	263
RbSb2(cr)	328.9678	262
Rb3Sb(cr)	378.1534	265
Rb3Sb7(cr)	1108.6534	261
Rb5Sb4(cr)	914.3390	264
SbCl3:3RbCl(cr)	590.8714	266
7RbBr:3SbBr3(cr)	2242.0686	267
RbC8(cr)	181.5574	268
RbC10(cr)	205.5798	269
RbC24(cr)	373.7366	270
RbC36(cr)	517.8710	271
RbC48(cr)	662.0054	272
RbC60(cr)	806.1398	273
RbC72(cr)	950.2742	274
Rb2CO3(cr)	230.9450	279 292 293 504 504 504 504 275
Rb2CO3(ai)	230.9450	277 463 464 465
Rb2CO3(5.76H2O)	230.9450	278
Rb2CO3(200H2O)	230.9450	279 280
Rb2CO3(2000H2O)	230.9450	277 280
Rb2CO3:H2O(cr)	248.9604	282
Rb2CO3:1.5H2O(cr)	257.9681	283
Rb2CO3:3H2O(cr)	284.9912	285
RbHCO3(cr)	146.4852	291 292 505 505 505 293
RbHCO3(ai)	146.4852	291 466 467 468
RbHCO3(200H2O)	146.4852	288
RbHCO3(2000H2O)	146.4852	287
C2H5ORb:C2H5OH(cr)	176.5994	289
3Rb2CO3:2RbHCO3:4.5H2O(cr)	1066.8747	290
RbCN(cr)	111.4857	298
Rb2SiF6(cr)	313.0120	300
Rb2GeCl6(cr)	456.2436	506 506 506 301 302

Table 1. Index to the Compounds and Their Reactions - Continued

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
Rb2SnCl6(cr)	502.3436	507 507 507 303 304
Rb2SnBr6(cr)	769.0796	306
PbI2:2RbI(cr)	885.7432	308
PbI2:2RbI:4H2O(cr)	957.8048	309
RbBO2(cr)	128.2776	508 508 508 310 311 312
RbBO2(g)	128.2776	509 509 509 311 313
RbBF4(cr)	172.2724	314
RbBCl4(cr)	238.0908	315 316
RbB(ClO4)4(cr)	494.0812	317
RbAl(SeO4)2:12H2O(cr)	614.5493	318
Rb2ZnCl4(cr)	378.1176	319
Rb2ZnBr4(cr)	555.9416	320
RbCl:ZnSO4(cr)	282.3524	323
CuCl2:2RbCl(cr)	376.2876	326
CuCl2:2RbCl:4H2O(cr)	448.3492	328
RbAg4I5(cr)	1151.4698	334 335 518 518 518 337 338 336
Rb2AgI3(cr)	659.5188	519 519 519 337 338
RbNiCl3(cr)	250.5368	339 340
RbCoCl3(cr)	250.7600	345
Rb2CoCl4(cr)	371.6808	346 347
Rb3CoCl5(cr)	492.6016	348
RbFeCl3(cr)	247.6738	351
Rb2FeCl4(cr)	368.5946	352
Rb2PtCl4(cr)	507.8376	353
Rb2PtCl6(cr)	578.7436	526 526 526 354 355
RbPtNH3Cl3(cr)	403.9475	356
Rb2IrCl6(cr)	575.8736	357
RbMnCl3(cr)	246.7648	358
RbReO4(cr)	335.6654	529 529 529 361 362
RbReO4(ai)	335.6654	530 530 530 361 362 469 470
Rb2CrO4(cr)	286.9292	364
Rb3CrO4F(cr)	391.3954	363
Rb3CrCl6(cr)	521.1174	365 367
Rb3Cr2Cl9(cr)	679.4724	366
RbMoF6(cr)	295.3982	370
RbWF6(cr)	383.3082	368
Rb3VCl6(cr)	520.0634	372
Rb3V2Cl9(cr)	677.3644	373
RbNbO3(cr)	226.3720	374
RbNbO3(ai)	226.3720	473
RbNbCl6(cr)	391.0918	376
Rb2NbOCl5(cr)	457.1060	378 379
RbTaCl6(cr)	479.1338	386
RbTiCl3(cr)	239.7268	384
Rb2TiCl4(cr)	360.6476	385

Table 1. Index to the Compounds and Their Reactions - Continued

COMPOUND	MOLAR MASS g/mol	REACTION NOS.
Rb2TiCl6(cr)	431.5536	387 388 389
Rb2TiBr6(cr)	698.2896	390
Rb3TiBr6(cr)	783.7574	391
Rb3Ti2Br9(cr)	1071.3844	392
RbGd(Fe(CN)6)(cr)	454.6722	393
RbCe(Fe(CN)6):2H2O(cr)	473.5730	394
RbUF6(cr)	437.4872	395
Rb(UO2)2F5(cr)	720.5154	396
Rb3UO2F5(cr)	621.4232	397
Rb5(UO2)2F9(cr)	1138.3802	398
RbUCl5(cr)	500.7618	399
RbUCl6(cr)	536.2148	400
Rb2UCl6(cr)	621.6826	401
Rb4UCl8(cr)	863.5242	402
Rb2UBr6(cr)	888.4186	403
Rb2ThCl6(cr)	615.6917	404
Rb2ThCl6:9H2O(cr)	777.8303	405
Rb4ThCl8(cr)	857.5333	406
Rb2Mg(SeO4)2(6400H2O)	481.1628	411
Rb2Mg(SeO4)2:6H2O(cr)	589.2552	409 410
RbCaCl3(cr)	231.9068	412
RbNO2:2Ba(NO2)2(cr)	590.1753	416
Ba(NO2)2:2RbNO2(cr)	492.2976	415
RbNaBr2(g)	268.2756	417
NaRb2CrCl6(cr)	458.6394	418
RbKCl2(cr)	195.4758	419 420
RbKCl2(g)	195.4758	421

Table 2. The Catalog of Thermochemical Measurements at 298.15 K

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
1	Rb(cr)	S=	76.78	0.29	.000	a	73HUL/DES
	H-H(0 K) = 1.790±0.005 KCAL/MOL, Cp = 7.424±0.005 CAL/(MOL K)						
	CONSTRAINT - SOLVED EXACTLY.						
2	Rb(g)	S=	170.089	0.021	.000	a	73HUL/DES
	At 0.1 MPa.						
	H-H(0 K) = 1.481±0.002 KCAL/MOL, Cp = 4.968±0.004 CAL/(MOL K)						
	CONSTRAINT - SOLVED EXACTLY.						
3	Rb(cr) = Rb(g)	ΔH=	80.877	0.209	.000	a	73HUL/DES
	CONSTRAINT - SOLVED EXACTLY.						
4	Rb(cr) = Rb(g)	ΔH=	80.977	0.335	.100	b	65BUC/FAU
	VAPOR PRESSURE DATA 307-363 K. INCLUDED IN 73HUL/DES						
	LISTED FOR INFORMATION ONLY.						
5	Rb(cr) = Rb(g)	ΔH=	82.994	0.544	2.117	b	24SCO
	VAPOR PRESSURE DATA 364-400 K INCLUDED IN 73HUL/DES						
	LISTED FOR INFORMATION ONLY.						
6	Rb(cr) = Rb(g)	ΔH=	80.902	0.335	.025	b	26KIL
	VAPOR PRESSURE 312-377 K. INCLUDED IN 73HUL/DES						
	LISTED FOR INFORMATION ONLY.						
7	Rb(g) = Rb+(g)	ΔH=	409.224	0.000	.000	0.002	70MOO
	IONIZATION POTENTIAL FROM OPTICAL SPECTRA						
	CONSTRAINT - SOLVED EXACTLY.						
8	Rb+(g) = Rb+2(g)	ΔH=	2638.81	0.25	-.013	a	72REA/EPS
	IONIZATION POTENTIAL FROM OPTICAL SPECTRA						
9	Rb+2(g) = Rb+3(g)	ΔH=	3834.2	83.7	.962	a	70MOO
	IONIZATION POTENTIAL FROM OPTICAL SPECTRA						
10	Rb(cr) + H+(ao) = Rb+(ao) + 0.5 H2(g)	ΔG=	-282.194	0.033	1.791	0.20	15LEW/ARG
	At 0.1 MPa.						
	CELL Rb(Hg)/RbOH(0.1M)/NCE, AND Rb/Rb(Hg) FROM 56FRI/SCH						
	USING ESTIMATED GAMMA 0.1M RbOH = 0.785						
	LISTED FOR INFORMATION ONLY.						
11	Rb(cr) = Rb(185Hg)	ΔG=	-103.72	0.42	1.925	0.40	15LEW/ARG
	LISTED FOR INFORMATION ONLY.						
12	Rb(cr) = Rb(185Hg)	ΔG=	-103.89	0.42	1.757	0.40	75JOR/TOB
	LISTED FOR INFORMATION ONLY.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
13	Rb(185Hg) + AgCl(cr) = Ag(cr) + RbCl(ai)	ΔG=	-199.723	0.209	.046	a	74LON/MUS
14	Rb(185Hg) + AgCl(cr) = Ag(cr) + RbCl(ai) CONVERTED FROM Rb(427Hg) USING 56FRI/SCH	ΔG=	-199.941	0.209	-.172	a	64LEB/ALE
15	Rb(185Hg) + OH-(ao) + H+(ao) = RbOH(ai) + 0.5 H2(g) AT 0.1 MPa. LISTED FOR INFORMATION ONLY.	ΔG=	-172.192	0.209	6.130	0.20	15LEW/ARG
16	RbOH(75H2O) = RbOH(200H2O) ESTIMATED, BASED ON 72VOR/MON CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.21	0.04	.000	a	75NBS
17	RbOH(100H2O) = RbOH(200H2O) ESTIMATED CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.08	0.04	.000	a	75NBS
17a	RbOH(147H2O) = RbOH(200H2O) ESTIMATED, BASED ON 72VOR/MON CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.04	0.04	.000	a	75NBS
18	RbOH(200H2O) = RbOH(ai) ESTIMATED CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.84	0.21	.000	a	75NBS
19	Rb(cr) + H2O(l) = RbOH(ai) + 0.5 H2(g) CORR. TO INFINITE DILN. AND 25°C LISTED FOR INFORMATION ONLY.	ΔH=	-199.2	2.1	-3.828	0.15	08REN
20	Rb(cr) + H2O(l) = RbOH(ai) + 0.5 H2(g) CORR. TO INFINITE DILN. USING VOROB'EV DATA.	ΔH=	-195.322	0.105	.008	b	67GUN
21	Rb(cr) + H2O(l) = RbOH(ai) + 0.5 H2(g) LISTED FOR INFORMATION ONLY.	ΔH=	-190.92	0.59	4.414	b	65VOR/IBR
22	Rb(cr) + H2O(l) = RbOH(ai) + 0.5 H2(g)	ΔH=	-195.06	0.42	.272	b	72VOR/MON
23	2 RbO2(cr) = Rb2O2(cr) + O2(g) DECOMPOSITION PRESSURES 280-360°C CORRECTED TO 25°C BY 2ND LAW	ΔH=	85.4	3.3	.000	6.0	62KRA/PET
24	Rb2O2(cr) = Rb2O(cr) + 0.5 O2(g) DECOMPOSITION PRESSURES 300-360°C CORRECTED TO 25°C BY 2ND LAW VALUE APPEARS LOW IN COMPARISON WITH Na2O AND K2O SYSTEMS LISTED FOR INFORMATION ONLY.	ΔH=	32.43	4.18	-100.625	7.5	62KRA/PET
25	Rb2O2(cr) = Rb2O(cr) + 0.5 O2(g) LISTED FOR INFORMATION ONLY.	ΔH=	109.	21.	-24.267	b	34CEN/BLU
26	Rb2O(cr) + H2(g) = 2 Rb(cr) + H2O(l) COMBINATION OF HEATS OF REACTION WITH H2O OF Rb AND Rb2O ΔCp = 8 CAL/(MOL K) LISTED FOR INFORMATION ONLY.	ΔH=	110.9	6.3	57.802	6.0	90BEK

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
27	$Rb_2O(cr) + H_2O(l) = 2\ RbOH(ai)$	ΔH=	-337.2	2.9	.356	6.0	08REN
	CORR. TO INFINITE DILN AND 25°C FROM 18°C. ΔCp= -85 CAL/(MOL K)						
28	$RbO_2(cr) + 0.5\ H_2O(l) = RbOH(ai) + 0.75\ O_2(g)$	ΔH=	-58.6	0.8	1.015	2.0	65D'O/WOO
	IN DIL. NaOH. CORR TO INFINITE DILN.						
29	$Rb_2O(g) = 2\ Rb(g) + 0.5\ O_2(g)$	ΔH=	212.1	14.6	.167	a	66NOR/STA
	KNUDSEN EFFUSION AND MASS SPECTROMETRY						
30	$RbH(cr) = Rb(cr) + 0.5\ H_2(g)$	ΔH=	26.8	6.3	-25.522	0.23	51HER
	DECOMP. PRESS. 245-350°C. CORR. TO SOLID AND 25°C						
	LISTED FOR INFORMATION ONLY.						
31	$RbOH(g) = Rb(g) + OH(g)$	ΔH=	351.	17.	-6.862	8.0	66JEN/PAD
	FROM FLAME STUDIES REDUCED BY THIRD LAW TO 0 K						
32	$Rb(g) + H_2O(g) = RbOH(g) + H(g)$	ΔH=	138.	21.	-2.347	8.0	71KEL/PAD
	FROM FLAME STUDIES						
33	$RbH(cr) + H_2O(l) = RbOH(ai) + H_2(g)$	ΔH=	-142.955	0.126	.075	0.20	67GUN
	CORR. TO INFINITE DILN.						
34	$RbOH(cr) = RbOH(ai)$	ΔH=	-62.97	0.63	.000	a	06FOR
	CONVERTED FROM 20°C WITH ΔCp = -38 CAL/(MOL K)						
35	$RbOH:H_2O(cr) = RbOH(ai) + H_2O(l)$	ΔH=	-18.16	0.29	-.021	0.63	06FOR
	CONVERTED FROM 20°C WITH ΔCp = -28 CAL/(MOL K)						
36	$RbOH:2H_2O(cr) = RbOH(ai) + 2\ H_2O(l)$	ΔH=	0.42	0.29	.000	0.63	09FOR
	CONVERTED FROM 15°C WITH ΔCp = -20 CAL/(MOL K)						
37	$2\ RbOH(g) = (RbOH)_2(g)$	ΔH=	-180.	42.	.000	a	59SCH/POR2
	KNUDSEN EFFSION AND MASS SPECTROMETRY						
38	$RbF(cr) = RbF(g)$	ΔH=	226.15	2.51	-.209	4.4	58SEN/STO
	VP 862-1063 K						
	CORRECTED TO 298 K USING 61SMI/KAY AND 73MAC 2ND LAW						
39	$RbF(cr) = RbF(g)$	ΔH=	226.81	2.51	.460	b	58SEN/STO
	VP 1087-1332 K						
	CORRECTED TO 298 K USING 61SMI/KAY AND 73MAC 2ND LAW						
40	$RbF(cr) = RbF(g)$	ΔH=	242.3	6.3	15.899	b	22RUF/SCH
	VP 1140-1400°C. CORRECTED TO 298 K USING 61SMI/KAY AND 73MAC 2ND LAW						
41	$RbF(cr) = RbF(g)$	ΔH=	225.9	6.3	-.418	b	21WAR/SCH
	VP 1163-1410°C. CORRECTED TO 298 K USING 61SMI/KAY AND 73MAC 2ND LAW						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
42	RbF(cr) = RbF(g) 2ND LAW FROM MASS SPECT-KNUDSEN AT 950 K, CORR TO 25°C	ΔH=	225.1	3.3	-1.255	b	58EIS/ROT
43	RbF(g) At 0.1 MPa. H-H(0 K) = 2.292±0.025 KCAL/MOL, Cp = 8.53±0.10 CAL/(MOL K) CALCULATED FROM MOLECULAR DATA IN 73BRU/KAR,	S=	237.09	0.63	.000	a	78NBS
44	RbF(cr) = RbF(g) VP 853-960 K. EQUATION ONLY	ΔH=	233.9	4.2	7.531	b	58PUG/BAR
45	RbF(cr) = RbF(100H2O) CORR. TO 25°C FROM 15°C WITH ΔCp = -30 CAL/(MOL K)	ΔH=	-25.5	0.4	-.042	a	11FOR
46	RbF(100000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.042	0.013	.000	a	65PAR
47	RbF(50000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.054	0.013	.000	a	65PAR
48	RbF(20000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.088	0.013	.000	a	65PAR
49	RbF(10000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.121	0.013	.000	a	65PAR
50	RbF(5000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.163	0.013	.000	a	65PAR
51	RbF(3000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.201	0.013	.000	a	65PAR
52	RbF(2000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.238	0.013	.000	a	65PAR
53	RbF(1500H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.264	0.013	.000	a	65PAR
54	RbF(1000H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.310	0.013	.000	a	65PAR
55	RbF(800H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.335	0.013	.000	a	65PAR
56	RbF(600H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.372	0.013	.000	a	65PAR
57	RbF(500H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.397	0.013	.000	a	65PAR
58	RbF(400H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.427	0.013	.000	a	65PAR

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
59	RbF(300H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.464	0.013	.000	a	65PAR
60	RbF(200H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.510	0.013	.000	a	65PAR
61	RbF(150H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.544	0.013	.000	a	65PAR
62	RbF(100H2O) = RbF(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.586	0.013	.000	a	65PAR
63	RbF(cr) = RbF(HCONH2:s) FORMAMIDE	ΔH=	-22.05	0.16	.000	a	65SOM/COO
64	RbF:1.5H2O(cr) = RbF(100H2O) + 1.5 H2O(l) CORR. TO 25°C FROM 15°C WITH ΔCp = -15 CAL/(MOL K)	ΔH=	1.97	0.63	.136	0.80	11FOR2
65	RbF:1.5H2O(cr) = RbF(cr) + 1.5 H2O(g) DECOMPOSITION OF HYDRATE AT 30-80°C	ΔH=	93.3	1.3	-.025	0.80	68THA/CHI
66	Rb2F2(g) At 0.1 MPa. CALCULATED FROM DATA IN 76WEL/LAZ. H-H(0 K) = 4.60±0.15 KCAL/MOL Cp = 19.1±0.2 CAL/(MOL K)	S=	344.0	1.3	.000	a	78NBS
67	Rb2F2(g) = 2 RbF(g) FROM MASS SPECTRAL INTENSITIES	ΔH=	183.7	20.9	-7.113	19.	58EIS/ROT
68	Rb2F2(g) = 2 RbF(g) MASS SPECTROMETRIC USING Na2F2 AS REFERENCE	ΔH=	202.1	20.9	11.297	b	59SCH/POR1
69	RbHF2(cr) H-H(0 K) = 3.932±0.004 KCAL/MOL, Cp = 18.97±0.02 CAL/(MOL K)	S=	120.08	0.13	.000	a	61BUR/WES
70	RbHF2(cr) = RbF(100H2O) + HF(100H2O) CONVERTED FROM 16°C WITH ΔCp = -55 CAL/(MOL K)	ΔH=	19.92	0.63	-.042	a	11FOR3
71	RbCl(cr) REINTEGRATED AT NBS. H-H(0 K) = 2.917±0.004 KCAL/MOL, Cp = 12.52±0.04 CAL/(MOL K) CONSTRAINT - SOLVED EXACTLY.	S=	95.90	0.17	.000	a	69PAU/KHR
72	RbCl(g) At 0.1 MPa. CALCULATED FROM MOLECULAR CONSTANTS IN 73BRU/KAR, H-H(0 K) = 2.402±0.025 KCAL/MOL, Cp = 8.80±0.05 CAL/(MOL K)	S=	249.56	0.63	.000	a	78NBS
73	RbCl(cr) = RbCl(g) VP 833-964 K, 3RD LAW APPROX. CORR. FOR DIMER REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	215.9	1.3	9.414	4.4	38NIW

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
74	RbCl(cr) = RbCl(g) VP 833-964 K, 3RD LAW SAME DATA AS 38NIW APPROX. CORR. FOR DIMER REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	215.0	1.3	0.414	b	30NIW2
75	RbCl(cr) = RbCl(g) VP 833-964 K, 2ND LAW. APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	207.9	1.3	1.464	b	38NIW
76	RbCl(cr) = RbCl(g) VP 833-964 K, 2ND LAW. APPROX. CORR. FOR DIMER. SAME DATA AS 38NIW REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	207.9	1.3	1.464	b	38NIW2
77	RbCl(cr) = RbCl(g) REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD VP 1133-1263 K, 2ND LAW. APPROX. CORR. FOR DIMER. LISTED FOR INFORMATION ONLY.	ΔH=	190.8	4.2	-15.690	b	38KAN/WIE
78	RbCl(cr) = RbCl(g) VP 885-925 K, 2ND LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	221.8	7.5	15.272	b	38MAY/WIN
79	RbCl(cr) = RbCl(g) VP 831-944 K, 2ND LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	201.2	4.6	-5.230	b	53TRE/WER
80	RbCl(cr) = RbCl(g) VP 831-944 K, 3RD LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	210.9	1.3	4.393	b	53TRE/WER
81	RbCl(cr) = RbCl(g) VP 676-878 K, 3RD LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	208.4	1.3	1.883	b	57NES/SAZ
82	RbCl(cr) = RbCl(g) VP 1415-1668 K, 2ND LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	251.5	18.8	44.978	b	21RUF/MUG
83	RbCl(cr) = RbCl(g) VP 885-925 K, 3RD LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	245.2	1.3	38.702	b	38MAY/WIN

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
84	RbCl(cr) = RbCl(g) VP 676-878 K, 2ND LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	202.5	3.8	-3.975	b	57NES/SAZ
85	RbCl(cr) = RbCl(g) VP 1434-1657 K, 2ND LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	210.5	3.8	3.975	b	21WAR/SCH
86	RbCl(cr) = RbCl(g) ION CURRENTS 830-970 K, 2ND LAW CORRECTED FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	205.0	6.3	-1.464	b	60MIL/KLE
87	RbCl(cr) = RbCl(g) FROM VP AT 1200 K, NO DETAILS. 2ND LAW APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	193.3	3.3	-13.180	b	72EMO/BRA
88	RbCl(cr) = RbCl(g) VP 890-980 K, ONLY 2ND LAW DELTA H GIVEN. APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	212.5	4.2	6.067	b	69HAS/SWI
89	RbCl(cr) = RbCl(g) VP 1213-1362 K, EQUATION ONLY, 2ND LAW. APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD LISTED FOR INFORMATION ONLY.	ΔH=	192.9	2.9	-13.598	b	72TOP
90	RbCl(cr) = RbCl(g) VP 825 K, 2ND LAW DELTA H ONLY. APPROX. CORR. FOR DIMER. REDUCED TO 298 K USING 60DWO/BRE AND 69VAS/POD	ΔH=	213.4	14.6	6.904	b	68BLO/HAS
91	Rb(cr) + AgCl(cr) = RbCl(ai) + Ag(cr) CELL Rb(Hg)/RbCl(aq)/AgCl/Ag AND Rb/Rb(Hg) FROM 56FRI/SCH LISTED FOR INFORMATION ONLY.	ΔG=	-303.357	0.033	2.059	0.20	64LEB/ALE
92	Rb(cr) + AgCl(cr) = Ag(cr) + RbCl(ai) USED Rb/Rb(Hg) FROM 75JOR/TOB LISTED FOR INFORMATION ONLY.	ΔG=	-303.591	0.209	1.824	b	74LON/MUS
93	Rb(cr) + AgCl(cr) = RbCl(ai) + Ag(cr) USED Rb/Rb(Hg) FROM 75JOR/TOB LISTED FOR INFORMATION ONLY.	ΔG=	-303.813	0.209	1.602	b	64LEB/ALE
94	RbCl(cr) = RbCl(ai) CORRECTED TO 25°C AND INFINITE DILUTION	ΔH=	16.82	0.63	-.209	0.15	12HAI

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
95	RbCl(cr) = RbCl(ai) CORR. TO INFINITE DILN.	ΔH=	17.217	0.167	.188	b	56SAM
96	RbCl(cr) = RbCl(1000H2O)	ΔH=	17.82	0.42	.556	0.17	64PAO/VAC
97	RbCl(400H2O) = RbCl(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.289	0.042	.000	a	65PAR
98	RbCl(1000H2O) = RbCl(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.264	0.084	-.025	a	65PAR
99	RbCl(2500H2O) = RbCl(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.21	0.08	.000	a	65PAR
100	RbCl(cr) = RbCl(ai) CORR. TO 25°C FROM 15 AND 35°C, AND TO INFINITE DILN.	ΔH=	17.45	0.54	.418	b	60SAM/BUS
101	RbCl(cr) = RbCl(ai) CORR. TO 25°C AND INFINITE DILN.	ΔH=	17.07	0.33	.042	b	10ZEM/RAM
102	RbCl(cr) = RbCl(ai) CORR. TO INFINITE DILN.	ΔH=	16.95	0.13	-.084	b	65EHR/KOK
103	RbCl(cr) = RbCl(ai) CORR. TO INFINITE DILN.	ΔH=	16.74	0.08	-.293	b	66VOR/IBR
104	RbCl(cr) = RbCl(ai)	ΔH=	16.90	0.08	-.126	b	66WU/FRI
105	RbCl(cr) = RbCl(ai) FROM SOLUBILITY AND ACTIVITY DATA IN 58MAK/EVS, 66BEL/LE, 53DUR/ROC, 58RAT/MAK	ΔG=	-7.41	0.08	.000	a	75NBS
106	RbCl(cr) = RbCl(ai) CORR. TO INFINITE DILN.	ΔH=	17.029	0.293	.000	b	69TSV/RAB
107	RbCl(cr) = RbCl(ai) CORR. TO 25°C AND INFINITE DILN.	ΔH=	17.209	0.628	.180	b	06FOR2
108	RbCl(cr) = RbCl(50HCOOH) FORMIC ACID	ΔH=	4.008	0.84	.033	a	64KOT/IVA
109	RbCl(cr) = RbCl(HCONH2:s) FORMAMIDE	ΔH=	2.971	0.021	.042	0.05	65SOM/COO
110	RbCl(cr) = RbCl(HCONHCH3:s) CONVERTED FROM 26.9°C WITH ΔCp = -25 CAL/(MOL K). N-METHYLFORMAMIDE	ΔH=	3.56	0.21	.042	a	72GIL/SIN
111	RbCl(cr) = RbCl(CH3OH:u)	ΔH=	9.20	0.33	.042	a	71KRI/FRI
112	RbCl(cr) = RbCl(C4H8O2:s) IN 20 PERCENT DIOXANE-WATER MIXTURE	ΔH=	15.376	0.209	.021	a	66PEA/SMI

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
113	2 RbCl(g) = Rb2Cl2(g)	ΔH=	-175.7	20.9	-14.226	b	61DAI/SMI
	FROM RELATIVE ION CURRENTS IN MASS SPECTROMETER						
114	Rb2Cl2(g)	S=	373.3	1.3	.000	a	78.NBS
	At 0.1 MPa.						
	H-H(0 K) = 4.94±0.15 KCAL/MOL, Cp = 19.4±0.2 CAL/(MOL K)						
	CALCULATED FROM DATA IN 76WEL/LAZ						
115	2 RbCl(g) = Rb2Cl2(g)	ΔH=	-155.2	20.9	6.276	12.	60MIL/KLE
	FROM DIFFERENCE IN SUBLIMATION SLOPES (ION CURRENTS)						
116	2 RbCl(cr) = Rb2Cl2(g)	ΔH=	255.2	20.9	3.766	12.	60MIL/KLE
	FROM PARTIAL PRESSURES, ION CURRENTS						
117	RbClO3(cr)	S=	151.9	1.7	.000	a	61KEL/KIN
	Cp = 24.66±0.05 CAL/(MOL K)						
118	RbClO3(cr) = RbClO3(ai)	ΔH=	47.74	0.25	-.042	a	38PIT
	CORR. TO INFINITE DILN.						
119	RbClO3(cr) = RbClO3(ai)	ΔG=	7.15	0.42	-1.339	0.85	12CAL
	SOLUBILITY DATA. GAMMA FROM DAVIES EQ.						
120	RbClO4(cr) = RbClO4(ai)	ΔH=	56.73	0.25	.000	a	38PIT
	CORR. TO INFINITE DILN.						
121	RbClO4(cr) = RbClO4(ai)	ΔH=	58.61	0.42	-.126	b	73KRI/BAB
	IN NaOH(400) CORR. TO INFINITE DILN. TAKEN AS NEGLIGIBLE						
122	RbClO4(cr) = RbClO4(ai)	ΔG=	14.234	0.042	-.159	0.05	69GUE
	SOLUBILITY. GAMMA FROM DAVIES EQ.						
123	RbClO4(cr) = RbClO4(ai)	ΔG=	14.401	0.042	.008	b	12CAL
	SOLUBILITY. GAMMA FROM DAVIES EQ.						
124	RbClO4(cr) = RbClO4(ai)	ΔG=	14.410	0.042	.017	b	70BIK/KUZ
	SOLUBILITY. GAMMA FROM DAVIES EQ.						
125	RbClO4(cr) = RbClO4(C4H8SO2;u)	ΔH=	9.41	0.63	.000	a	69CHO/BEN
	CORR. TO 25°C. SULFOLANE.						
126	RbClO4(cr) = RbClO4(HCON(CH3)2;s)	ΔH=	-7.74	0.21	.000	a	72GIL/SIN
	CONVERTED FROM 26.9°C WITH ΔCp = -50 CAL/(MOL K).						
	N,N-DIMETHYLFORMAMIDE						
127	RbClO4(cr) = RbClO4(HCONHCH3;s)	ΔH=	11.72	0.21	.000	a	72GIL/SIN
	CONVERTED FROM 26.9°C WITH ΔCp = -50 CAL/(MOL K).						
	N-METHYLFORMAMIDE						
128	RbClO4(cr) = RbClO4(HCONH2;s)	ΔH=	17.32	0.21	.000	a	72GIL/SIN
	FORMAMIDE.						
	CONVERTED FROM 26.9°C WITH ΔCp = -50 CAL/(MOL K).						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
129	RbClO4(cr) = RbClO4(CH3CON(CH3)2·s) N,N-DIMETHYLACETAMIDE CORRECTED FROM 26.9°C WITH ΔCp = -45 CAL/(MOL K)	ΔH=	-10.04	0.21	.000	a	75PAU/BAN
130	RbBr(cr) H-H(0 K) = 3.124±0.005 KCAL/MOL, Cp = 12.63±0.01 CAL/(MOL K). REINTEGRATED AT NBS. CONSTRAINT - SOLVED EXACTLY.	S=	109.96	0.21	.000	a	49CLU/GOL
131	RbBr(g) At 0.1 MPa. CALCULATED FROM MOLECULAR CONSTANTS IN 73BRU/KAR, H-H(0 K) = 2.465±0.025 KCAL/MOL, Cp = 8.89±0.05 CAL/(MOL K)	S=	261.02	0.63	.000	a	78NBS
132	Rb2Br2(g) At 0.1 MPa. CALCULATED FROM DATA IN 76WEL/LAZ H-H(0 K) = 5.19±0.15 KCAL/MOL, Cp = 19.6±0.2 CAL/(MOL K)	S=	390.8	1.3	.000	a	78NBS
133	RbBr(cr) = RbBr(g) VP 1372-1631 K, 2ND LAW. APPROX. CORR. FOR DIMER. USED ESTIMATED ΔCp TO CORRECT TO 298 K. ΔfusH FROM 60DWO/BRE	ΔH=	209.6	2.1	-2.134	4.5	21WAR/SCH
134	RbBr(cr) = RbBr(g) VP 1323-1638 K, 2ND LAW APPROX. CORR. FOR DIMER. USED ESTIMATED ΔCp TO CORRECT TO 298 K. ΔfusH FROM 60DWO/BRE	ΔH=	208.8	7.5	-2.971	b	21RUF/MUG
135	RbBr(cr) = RbBr(g) VP 856-911 K, 2ND LAW. APPROX. CORR. FOR DIMER. USED ESTIMATED ΔCp TO CORRECT TO 298 K. ΔfusH FROM 60DWO/BRE	ΔH=	219.7	6.3	7.908	b	38MAY/WIN
136	RbBr(cr) = RbBr(g) VP 650-850 K. EQUATION ONLY. 2ND LAW. APPROX. CORR. FOR DIMER. USED ESTIMATED ΔCp TO CORRECT TO 298 K. ΔfusH FROM 60DWO/BRE	ΔH=	208.4	2.9	-3.389	b	68MAK/STU
137	RbBr(cr) = RbBr(g) VP EQUATION ONLY, 2ND LAW. APPROX. CORR. FOR DIMER. USED ESTIMATED ΔCp TO CORRECT TO 298 K. ΔfusH FROM 60DWO/BRE LISTED FOR INFORMATION ONLY.	ΔH=	194.6	2.9	-17.196	b	72TOP
138	RbBr(1000H2O) = RbBr(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.234	0.084	.000	a	65PAR
139	RbBr(cr) = RbBr(ai) IN HICL(100) CORR. UNCERTAIN.	ΔH=	23.51	1.26	1.632	0.4	64SHC/VAS

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
140	RbBr(cr) = RbBr(ai) CORR. TO INFINITE DILN.	ΔH=	23.01	1.05	1.130	b	11FOR
141	RbBr(cr) = RbBr(ai) IN RB1O1H(75). CORR. TO INFINITE DILN.	ΔH=	21.67	0.63	-.209	b	68STE/PLY
142	RbBr(cr) = RbBr(ai) CORR. TO INFINITE DILN.	ΔH=	21.88	0.42	.000	b	37LAN/MAR
143	RbBr(cr) = RbBr(ai) SOLUBILITY. GAMMA FROM 64MAK/VLA	ΔG=	-6.159	0.042	-.008	0.20	59MAK/POP
144	RbBr(cr) = RbBr(ai) SOLUBILITY. GAMMA FROM 64MAK/VLA	ΔG=	-6.443	0.029	-.293	b	66VLA/STE
145	RbBr(cr) = RbBr(ai) SOLUBILITY. GAMMA FROM 64MAK/VLA	ΔG=	-6.259	0.209	-.109	b	53DUR/ROC
146	RbBr(cr) = RbBr(HCONH2:s) FORMAMIDE	ΔH=	3.14	0.04	.000	a	65SOM/COO
147	RbBr3(cr) = RbBr(cr) + Br2(g) DECOMPOSITION PRESSURE 63-105°C	ΔH=	53.6	4.2	-1.159	4.0	17EPH
148	RbBr3(cr) = RbBr(cr) + Br2(g) DECOMPOSITION PRESSURES 36-78°C	ΔH=	56.5	5.4	1.770	b	25HUT/SCH
149	RbBr3(cr) = RbBr(cr) + Br2(g) At 0.1 MPa. DECOMPOSITION PRESSURE 63-105°C LEADS TO UNREASONABLE S RbBr3(cr)=50 CAL/(MOL K) FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.	ΔG=	11.3	1.3			17EPH
150	RbBr3(cr) = RbBr(cr) + Br2(g) At 0.1 MPa. DECOMPOSITION PRESSURES 36-78°C LEADS TO UNREASONABLE S RbBr3(cr)=53 CAL/(MOL K) FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.	ΔG=	13.4	1.7			25HUT/SCH
151	RbBrO3(cr) = RbBrO3(ai) SOLUBILITY. GAMMA FROM DAVIES EQ.	ΔG=	12.64	0.21	-.042	a	21BUE/MCC
152	RbBrO3(cr) = RbBrO3(ai) CORR. TO INFINITE DILN.	ΔH=	49.04	0.42	.000	a	62BOY/VAL
153	RbBrCl2(cr) = RbCl(cr) + 0.5 Br2(g) + 0.5 Cl2(g) At 0.1 MPa. DECOMPOSITION PRESSURES 17-93°C PRODUCTS UNCERTAIN FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.	ΔG=	8.3	2.1			17EPH
154	RbBrCl2(cr) = RbCl(cr) + 0.5 Br2(g) + 0.5 Cl2(g) DECOMPOSITION PRESSURES 17-93°C PRODUCTS UNCERTAIN	ΔH=	65.3	6.3	-1.019	a	17EPH

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
155	RbBr2Cl(cr) = RbCl(cr) + Br2(g)	ΔG=	10.0	1.3			17EPH
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 18-81°C						
	FOR INFORMATION ONLY. ALSO. VARIABLE NOT SOLVED OR DATA MISSING.						
156	RbBr2Cl(cr) = RbCl(cr) + Br2(g)	ΔH=	67.8	4.2	-.155	a	17EPH
	DECOMPOSITION PRESSURES 18-81°C						
157	RbI(cr)	S=	118.41	0.21	.000	a	49CLU/GOL
	H-H(0 K) = 3.190±0.010 KCAL/MOL, Cp = 12.71±0.05 cal.K -1.						
	REINTEGRATED AT NBS						
	CONSTRAINT - SOLVED EXACTLY.						
158	RbI(g)	S=	268.81	0.63	.000	a	78NBS
	At 0.1 MPa.						
	CALCULATED FROM MOLECULAR DATA IN 73BRU/KAR,						
	H-H(0 K) = 2.499±0.025 KCAL/MOL, Cp = 8.93±0.05 CAL/(MOL K)						
159	Rb2I2(g)	S=	415.6	1.3	.000	a	78NBS
	At 0.1 MPa.						
	CALCULATED FROM DATA IN 76WEL/LAZ. H-H(0 K) = 5.29± 0.15 KCAL/MOL,						
	Cp = 19.7±0.2 CAL/(MOL K)						
160	RbI(cr) = RbI(g)	ΔH=	198.3	2.1	-1.172	4.5	68MAK/STU
	VP 650-850 K, EQUATION ONLY, 2ND LAW. APPROX. CORR. FOR DIMER.						
	USED ESTIMATED ΔCp TO CORRECT TO 298 K.						
	ΔfusH FROM 60DWO/BRE						
161	RbI(cr) = RbI(g)	ΔH=	205.4	1.3	5.941	b	58BRI
	VP 700-900 K, 2ND LAW. APPROX. CORR. FOR DIMER.						
	USED ESTIMATED ΔCp TO CORRECT TO 298 K.						
	ΔfusH FROM 60DWO/BRE						
162	RbI(cr) = RbI(g)	ΔH=	203.8	8.4	4.268	b	21RUF/MUG
	VP 1348-1598 K, 2ND LAW. APPROX. CORR. FOR DIMER.						
	USED ESTIMATED ΔCp TO CORRECT TO 298 K.						
	ΔfusH FROM 60DWO/BRE						
163	RbI(cr) = RbI(g)	ΔH=	202.5	4.2	3.012	b	21WAR/SCH
	VP 1308-1575 K, 2ND LAW. APPROX. CORR. FOR DIMER.						
	USED ESTIMATED ΔCp TO CORRECT TO 298 K.						
	ΔfusH FROM 60DWO/BRE.						
164	RbI(cr) = RbI(g)	ΔH=	195.0	6.3	-4.519	b	38NIW
	VP 773-873 K, 2ND LAW. APPROX. CORR. FOR DIMER.						
	USED ESTIMATED ΔCp TO CORRECT TO 298 K.						
	ΔfusH FROM 60DWO/BRE.						
165	RbI(cr) = RbI(g)	ΔH=	195.0	6.3	-4.519	b	38NIW2
	VP 773-873 K, 2ND LAW. APPROX. CORR. FOR DIMER.						
	SAME DATA AS 38NIW						
	USED ESTIMATED ΔCp TO CORRECT TO 298 K.						
	ΔfusH FROM 60DWO/BRE.						
	LISTED FOR INFORMATION ONLY.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
166	RbI(cr) = RbI(g) VP EQUATION ONLY, 2ND LAW. APPROX. CORR. FOR DIMER. USED ESTIMATED ΔCp TO CORRECT TO 298 K. ΔfusH FROM 60DWO/BRE	ΔH=	197.1	2.9	-2.427	b	72TOP
167	RbI(cr) = RbI(ai) SOLUBILITIES FROM 41BRI/CON, 31FAJ/KAR, 09FOO/CHA, GAMMA FROM 61MAR/STU	ΔG=	-6.69	0.08	.000	a	75NBS
168	RbI(cr) = RbI(ai) SOLUBILITY AND ACTIVITY COEF.	ΔG=	-6.640	0.084	.054	b	61MAK/STU
169	RbI(cr) = RbI(ai) CONVERTED FROM 15°C WITH ΔCp = -40 CAL/(MOL K)	ΔH=	25.5	0.8	-1.925	1.5	11FOR
170	RbI(2000H2O) = RbI(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.197	0.021	.000	a	65PAR
171	RbI(cr) = RbI(2000H2O) CONVERTED FROM 15°C WITH ΔCp = -40 CAL/(MOL K)	ΔH=	24.06	0.42	-3.586	1.5	97MOS
172	RbI(cr) = RbI(CH3CN:u) ACETONITRILE	ΔH=	-7.95	0.29	.000	a	73ABR
173	RbI(cr) = RbI(HCONHCH3:s) CONVERTED FROM 26.9°C WITH ΔCp = -20 CAL/(MOL K). N-METHYLFORMAMIDE	ΔH=	6.44	0.21	.000	a	72GIL/SIN
174	RbI(cr) = RbI(CH3CONHCH3:s2) N-METHYLACETAMIDE. CORR. TO 25°C. CONVERTED FROM 26.9°C WITH ΔCp = -20 CAL/(MOL K).	ΔH=	-1.590	0.100	.000	a	67WEE/SOM2
175	RbI(cr) = RbI(HCON(CH3)2:s) CORR TO 25°C. N,N-DIMETHYLFORMAMIDE.	ΔH=	-27.61	0.13	.084	0.20	72GIL/SIN
176	RbI(cr) = RbI(HCON(CH3)2:s) N,N-DIMETHYLFORMAMIDE	ΔH=	-27.78	0.08	-.084	0.20	67WEE/SOM
177	RbI(cr) = RbI(HCON(CH3)2:s) N,N-DIMETHYLFORMAMIDE	ΔH=	-25.86	0.21	1.841	b	71KRE/ZVE
178	RbI(cr) = RbI(1000NH2CH2CH2NH2) ETHYLENEDIAMINE	ΔH=	-18.83	0.21	.000	a	69SCH/GOD
179	RbI(cr) = RbI(HCONH2:s) FORMAMIDE	ΔH=	0.96	0.04	.000	a	65SOM/COO
180	RbI(cr) + I2(cr) = RbI3(cr) FROM SOLID STATE CELLS.	ΔG=	-10.17	0.42	-.126	a	

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
181	RbI(cr) + I2(cr) = RbI3(cr)	ΔS=	-9.6	2.1	-.598	a	68TOP
	FROM SOLID STATE CELLS.						
182	RbI3(cr) = RbI(cr) + I2(g)	ΔH=	72.4	2.9	-2.690	0.8	65STE/BAB
	DECOMPOSITION PRESSURES 100-190°C, CORRECTED TO 25°C						
	SEE ALSO 68BAB/STE						
183	RbI3(cr) = RbI(cr) + I2(g)	ΔH=	59.8	4.2	-15.242	b	17EPH
	DECOMPOSITION PRESSURES 166-200°C, CORR 25°C						
	LISTED FOR INFORMATION ONLY.						
184	RbI3(cr) = RbI(cr) + I2(g)	ΔH=	74.5	2.1	-.598	b	69STE/ALL
	THERMOGRAVIMETRIC ANALYSIS OF DECOMPOSITION, CORR 25°C						
185	RbIO3(cr) = RbI(cr) + 1.5 O2(g)	ΔH=	129.3	6.3			67BOU/REM
	DECOMPOSITION PRESSURES 597-748K CORR 25°C						
	NOT CLEAR IF AN EQUILIBRIUM PROCESS						
	FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.						
186	RbIO3(cr) = RbI(cr) + 1.5 O2(g)	ΔG=	74.4	6.3	-23.012	2.0	67BOU/REM
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 597-748 K CORR 25°C						
	NOT CLEAR IF AN EQUILIBRIUM PROCESS						
	LISTED FOR INFORMATION ONLY.						
187	RbIO3(cr) = RbIO3(ai)	ΔG=	14.23	0.21	.000	a	75NBS
	SOLUBILITY = .0926 mol/kg FROM 52LAR/REN,						
	GAMMA=0.6135 FROM DAVIES EQUATION						
188	RbIC12(cr) = RbCl(cr) + ICl(CCl4:x)	ΔG=	27.2	2.1	-.126	a	31CRE/DUN
189	RbICl4(cr) = RbCl(cr) + Cl2(g) + ICl(g)	ΔH=	123.68	4.18	-15.648	2.8	58SMY/CUT
	DECOMPOSITION 35-90°C. FROM THEIR EQUATION						
190	RbICl4(cr) = RbCl(cr) + Cl2(g) + ICl(g)	ΔG=	30.81	1.05			58SMY/CUT
	At 0.1 MPa.						
	DECOMPOSITION 35-90°C. FROM THEIR EQUATION						
	LEADS TO S RbICl4(cr)=48.6 CAL/(MOL K), CONSIDERED LOW.						
	FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.						
191	3 RbICl4(cr) + 15 AgNO3(2000H2O) + 6 H2O(l) =	ΔH=	-878.58	1.50	.064	a	77FIN/GAT
	AgI(cr) + 2 AgIO3(cr) + (12HNO3:3RbNO3:12AgCl)(aq)						
	REACTION SPLIT FOR MACHINE PROCESSING						
192	(12HNO3:3RbNO3:12AgCl)(aq) = 12 HNO3(4000H2O) +	ΔH=	0.0	0.0	.000		77FIN/GAT
	12 AgCl(cr) + 3 RbNO3(6000H2O)						
	CONSTRAINT - SOLVED EXACTLY.						
193	RbIBr2(cr) = RbBr(cr) + IBr(g)	ΔH=	52.3	2.1			17EPH
	DECOMPOSITION 106-175°C						
	LEADS TO S RbIBr2(cr)>60 CAL/(MOL K)						
	FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
194	RbIBr2(cr) = RbBr(cr) + IBr(g) At 0.1 MPa. DECOMPOSITION 106-175°C.	ΔG=	17.29	2.09	-8.276	1.7	17EPH
195	RbIBr2(cr) = RbBr(cr) + IBr(CCl4:x)	ΔG=	18.8	1.3	.628	a	31CRE/DUN
196	RbIBrCl(cr) = RbCl(cr) + IBr(CCl4:x)	ΔG=	18.8	1.3	.293	a	31CRE/DUN
197	2 RbOH(200H2O) + H2S(ao) = Rb2S(500H2O) + 2 H2O(l) CONVERTED FROM 10°C WITH ΔCp = -60 CAL/(MOL K)	ΔH=	-35.6	2.1	.126	a	14REN/COS
198	Rb2S(cr) = Rb2S(500H2O) CONVERTED FROM 18°C WITH ΔCp = -35 CAL/(MOL K)	ΔH=	-103.8	4.2	.000	a	14REN/COS
199	Rb+(ao) + S2O8-2(ao) = RbS2O8-(ao) FROM OSMOMETRIC MEAS AS FUNCTION OF TEMP AROUND 25°C	ΔG=	-6.65	0.84	.167	a	71CHL/LIS
200	Rb+(ao) + S2O8-2(ao) = RbS2O8-(ao) FROM OSMOMETRIC MEAS AS FUNCTION OF TEMP AROUND 25°C	ΔH=	5.4	2.1	-.126	a	71CHL/LIS
201	RbOH(200H2O) + H2S(ao) = RbHS(500H2O) + H2O(l) ASSUMING RbHS RATHER THAN Rb2S	ΔH=	-35.6	2.1	.063	a	14REN/COS
202	RbHS(cr) = RbHS(500H2O) CONVERTED FROM 0°C WITH ΔCp = -30 CAL/(MOL K)	ΔH=	-3.14	0.42	-.209	0.50	41TEI/KLE
203	Rb2SO4(cr) H-H(0 K) = 6.458±0.010 KCAL/MOL, Cp = 32.04±0.05 CAL/(MOL K)	S=	197.44	0.21	.000	a	68PAU/LAV
204	Rb2SO4(cr) = Rb2SO4(g) KNUDSEN VAPOR PRESSURES 1090-1300 K, 2ND LAW CORRECTED TO 25° WITH ESTIMATED ΔCp	ΔH=	366.9	12.6	-.084	a	71CUB
205	Rb2SO4(cr) = Rb2SO4(ai) CONVERTED FROM 15°C WITH ΔCp = -75 CAL/(MOL K)	ΔH=	23.8	0.4	-.167	b	06FOR2
206	Rb2SO4(cr) = Rb2SO4(ai) CORRECTED TO INFINITE DILN.	ΔH=	24.02	0.13	.000	a	66VOR/IBR
207	2 RbOH(ai) + H2SO4(200H2O) = 2 H2O(l) + Rb2SO4(500H2O) CONVERTED FROM 15°C WITH ΔCp = -80 CAL/(MOL K)	ΔH=	-126.44	0.84	4.954	0.08	06FOR2
208	Rb2SO4(cr) = Rb2SO4(ai) SOLUBILITY FROM 04ETA, 04BER, 52CAL/SMI, GAMMA FROM 59ROB/STO	ΔG=	4.39	0.08	.000	a	75NBS
209	Rb2SO4(500H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.916	0.013	.000	a	31LAN/STR
210	Rb2SO4(800H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.937	0.013	.000	a	31LAN/STR

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
211	Rb2SO4(1000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.933	0.013	.000	a	31LAN/STR
212	Rb2SO4(1500H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.904	0.013	.000	a	31LAN/STR
213	Rb2SO4(2000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.879	0.013	.000	a	31LAN/STR
214	Rb2SO4(3000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.824	0.013	.000	a	31LAN/STR
215	Rb2SO4(5000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.736	0.013	.000	a	31LAN/STR
216	Rb2SO4(10000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.577	0.013	.000	a	31LAN/STR
217	Rb2SO4(20000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.435	0.013	.000	a	31LAN/STR
218	Rb2SO4(50000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.293	0.013	.000	a	31LAN/STR
219	Rb2SO4(100000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.213	0.013	.000	a	31LAN/STR
220	Rb2SO4(200000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.155	0.013	.000	a	31LAN/STR
221	Rb2SO4(500000H2O) = Rb2SO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.100	0.013	.000	a	31LAN/STR
222	RbOH(200H2O) + H2SO4(200H2O) = RbHSO4(400H2O) + H2O(l) CONVERTED FROM 15°C WITH ΔCp = 50 CAL/(MOL K)	ΔH=	-62.13	0.42	-.092	0.40	06FOR2
223	RbHSO4(cr) = RbHSO4(400H2O) CONVERTED FROM 15°C WITH ΔCp = -40 CAL/(MOL K)	ΔH=	13.8	0.4	.000	a	06FOR2
224	RbSO2F(cr) = RbF(cr) + SO2(g) CORRECTED TO 25°C FROM 150°C. THEIR EQUATION ONLY.	ΔH=	89.5	2.1	-.234	a	66SEE/BOU
225	RbI:3SO2(cr) = 3 SO2(g) + RbI(cr) LEAST SQ OF DECOMP PRESSURE, CORR TO 25°C COMPOUND MAY BE LIQUID	ΔH=	128.03	2.09	.050	3.0	31FOO/FLE
226	RbI:3SO2(cr) = 3 SO2(g) + RbI(cr) LEAST SQ OF DECOMP DATA COMPOUND MAY BE LIQUID	ΔH=	129.7	6.3	1.724	b	19FOR/TAB

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	UNIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
227	RbI:3SO2(cr) = 3 SO2(g) + RbI(cr)	ΔH=	120.1	3.1	-7.899	b	16EPH/KOR
	LEAST SQ OF DECOMP DATA, CORR TO 25°C. COMPOUND MAY BE LIQUID						
228	Rb2SeO3(cr) = 2 Rb+(ao) + SeO3-2(ao)	ΔH=	-38.24	0.64	.502	0.50	60KLU/SEL
	COMBINING HEATS OF REACTION OF Na2SeO3 AND Rb2SeO3 WITH Pb(NO3)2 USING DATA FROM 62SEL/LES AND 63SEL/LES						
229	Rb2SeO3(cr)+ 2 NaNO3(400H2O) = 2 RbNO3(400H2O) + Na2SeO3(cr)	ΔH=	-8.8	0.4	.000	0.50	69KLU/SEL
230	Rb2SeO4(cr) + 2 AgNO3(400H2O) = Ag2SeO4(cr) + 2 RbNO3(400H2O)	ΔH=	-20.21	0.42	-.100	a	63SEL/GAZ
231	Rb2SeO4(aq) = 2 Rb+(ao) + SeO4-2(ao)	ΔH=	0.	0.	-.167		75NBS
	ASSUMED						
	CONSTRAINT - SOLVED EXACTLY.						
232	RbHSe(cr) = RbHSe(aq)	ΔH=	5.23	2.09	.209	a	41TEI/KLE
	CONVERTED FROM 0°C WITH ΔCp = -30 CAL/(MOL K)						
233	RbHSe(aq) = RbHSe(ai)	ΔH=	-0.8	0.4	.000	a	75NBS
	BASED ON RbHS DATA						
234	RbHSe(ai) = Rb+(ao) + HSe-(ao)	ΔH=	0.	0.	.126		75NBS
	CONSTRAINT - SOLVED EXACTLY.						
235	Rb2TeO3(cr) = Rb2TeO3(6000H2O)	ΔH=	-50.96	0.42	.084	0.84	69KHA/SAM
	CONCENTRATION ASSUMED BASED ON PREVIOUS WORK						
236	Rb2TeO3:H2O(cr) = Rb2TeO3(6000H2O) + H2O(l)	ΔH=	-27.61	0.21	.063	0.42	69KHA/SAM
	CONCENTRATION ASSUMED BASED ON PREVIOUS WORK						
237	Rb2TeO3:H2O(cr) + Pb(NO3)2(265H2O) = 2 RbNO3(135H2O) + PbTeO3:0.667H2O(vit) + 0.333 H2O(l)	ΔH=	-57.3	0.8	-.381	1.6	69KHA/SAM
	BACK CALCULATED FROM REPORTED ΔfH						
238	Rb2TeO3:3H2O(cr) + Pb(NO3)2(265H2O) = 2 RbNO3(130H2O) + PbTeO3:0.667H2O(vit) + 2.333 H2O(l)	ΔH=	-36.86	0.21	-.214	0.42	69KHA/SAM
239	6 RbBr(cr) + TeO2(cr) + 2 H2O(l) = Rb2TeBr6(cr) + 4 RbOH(75H2O)	ΔH=	341.0	0.4	-.377	0.80	68STE/PLY
240	RbN3(cr) = RbN3(aq)	ΔH=	28.03	0.13	.084	0.15	56GRA/WAD
241	RbN3(aq) = RbN3(ai)	ΔH=	-0.21	0.21	.000	a	75NBS
	ESTIMATED						
	CONSTRAINT - SOLVED EXACTLY.						
242	RbNO2(cr) = RbNO2(ai)	ΔG=	-9.79	0.63	.251	a	69CHE/PRO
	V.P. OF SAT. SOLN.						
243	RbNO2(cr) = RbNO2(ai)	ΔH=	12.6	2.1			62PRO/AND
	FROM HEAT SOLN. MIXTURES WITH Ba(NIO2)2						
	LEADS TO UNREASONABLE S RbNO2(cr)=45 CAL/(MOL K)						
	A VALUE IN LOW 30'S WOULD BE EXPECTED						
	FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
244	RbNO3(135H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	1.42	0.21	.000	a	65PAR
245	RbNO3(130H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	1.46	0.21	.000	a	65PAR
246	RbNO3(200H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.920	0.209	.000	a	65PAR
247	RbNO3(400H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.385	0.126	.000	a	65PAR
248	RbNO3(1000H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.042	0.126	.000	a	65PAR
249	RbNO3(3200H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.088	0.021	.004	a	65PAR
250	RbNO3(5000H2O) = RbNO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	-0.092	0.126	.000	a	65PAR
251	RbNO3(cr) = RbNO3(ai) SOLUBILITY FROM 04BER, GAMMA FROM 72HAM/WU	ΔG=	0.527	0.209	-.017	a	75NBS
252	RbNO3(cr) = RbNO3(ai) CORRECTED TO 25°C	ΔH=	36.44	0.17	-.084	0.20	12HAI
253	RbNO3(cr) = RbNO3(ai) UNKNOWN CORR. TO INFINITE DILN.	ΔH=	36.23	0.21	-.293	b	67KRE/EGO
254	RbF:HNF2(cr) = RbF(cr) + NF2H(g)) DECOMPOSITION PRESSURES -65 TO -32°C, CORRECTED TO 25°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	38.9	4.2			65LAW/PIL
255	RbH2PO4(cr) = Rb+(ao) + H2PO4-(ao)	ΔH=	14.81	0.42	..000	a	74VOR/MON
256	H3PO4(0.628H2O) + RbOH(147H2O) = RbH2PO4(cr) + H2O(l)	ΔH=	-100.8	2.1	-5.711	1.2	73RUD/YAG2
257	2 RbH2PO4(cr) = Rb2H2P2O7(cr) + H2O(g) DECOMPOSITION PRESSURES. ONLY ΔH AND ΔS GIVEN	ΔH=	75.3	2.9	.067	a	73RUD/YAG
258	Rb2H2P2O7(cr) = 2 RbPO3(cr) + H2O(g) DECOMPOSITION PRESSURES. ONLY ΔH AND ΔS GIVEN	ΔH=	91.2	2.9	-.017	a	73RUD/YAG
259	RbPF6(cr) Cp = 35.4±0.1 CAL/(MOL K)	S=	221.84	0.63	.000	a	63STA/GRE
260	RbPF6(cr) = RbF(cr) + PF5(g) ESTIMATED, BASED ON K2CO3	ΔH=	201.2	4.2	.000	a	72EHL/HSI

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
261	Rb3Sb7(cr) = 7 Sb(cr) + 3 Rb(g) DECOMPOSITION PRESSURE, 596-654 K CORR TO 25°C	ΔH=	552.7	20.9	.042	a	69GER/VOR
262	7 RbSb2(cr) = 2 Rb3Sb7(cr) + Rb(g) DECOMPOSITION PRESSURE 596-690 K, CORR TO 25°C	ΔH=	177.15	4.18	-1.213	a	69GER/VOR
263	2 RbSb(cr) = RbSb2(cr) + Rb(g) DECOMPOSITION PRESSURE 589-642 K, CORR TO 25°C	ΔH=	178.2	3.3	-.126	a	69GER/VOR
264	Rb5Sb4(cr) = 4 RbSb(cr) + Rb(g) DECOMPOSITION PRESSURE, 425-564 K, CORR TO 25°C	ΔH=	124.77	1.67	-.042	a	69GER/VOR
265	4 Rb3Sb(cr) = Rb5Sb4(cr) + 7 Rb(g) DECOMPOSITION PRESSURE, 392-554 K CORR TO 25°C	ΔH=	817.1	1.7	.377	a	69GER/VOR
266	SbCl3:3RbCl(cr) = 3 RbCl(cr) + SbCl3(g) ESTIMATED CORR. TO 25°C	ΔH=	96.2	3.3	-.209	a	69STE/ALL
267	7RbBr:3SbBr3(cr) = 7 RbBr(cr) + 3 SbBr3(g) ESTIMATED CORR. TO 25°C	ΔH=	355.2	9.2	-.126	a	69STE/ALL
268	8 C(cr) + Rb(cr) = RbC8(cr) CORRECTED FOR HEAT OF FUSION OF Rb	ΔH=	-44.3	2.1	.000	a	64SAE
269	4 RbC10(cr) + Rb(g) = 5 RbC8(cr) REDUCED FROM 450°C WITH ΔCp = -2 CAL/(MOL K)	ΔH=	-169.9	6.3	.544	a	66SAL/ARO
270	5 RbC24(cr) + 7 Rb(g) = 12 RbC10(cr) REDUCED FROM 500°C WITH ΔCp = -14 CAL/(MOL K)	ΔH=	-767.3	43.9	.879	a	66SAL/ARO
271	2 RbC36(cr) + Rb(g) = 3 RbC24(cr) REDUCED FROM 600°C WITH ΔCp = -2 CAL/(MOL K)	ΔH=	-118.4	6.3	-.293	a	66SAL/ARO
272	3 RbC48(cr) + Rb(g) = 4 RbC36(cr) REDUCED FROM 600°C WITH ΔCp = -2 CAL/(MOL K)	ΔH=	-128.0	6.3	.126	a	66SAL/ARO
273	4 RbC60(cr) + Rb(g) = 5 RbC48(cr) REDUCED FROM 600°C WITH ΔCp = -2 CAL/(MOL K)	ΔH=	-134.7	6.3	.126	a	66SAL/ARO
274	5 RbC72(cr) + Rb(g) = 6 RbC60(cr) REDUCED FROM 600°C WITH ΔCp = -2 CAL/(MOL K)	ΔH=	-137.7	6.3	-.711	a	66SAL/ARO
275	Rb2CO3(cr) H-H(0 K) = 5.851±0.010 KCAL/MOL, Cp = 8.11±0.06 CAL/(MOL K)	S=	181.33	0.42	.000	a	71PAU/KHR
276	H2CO3(ao) + 2 RbOH(100H2O) = Rb2CO3(2000H2O) + 2 H2O(l) CONVERTED FROM 15°C WITH ΔCp = -30 CAL/(MOL K) LISTED FOR INFORMATION ONLY.	ΔH=	-84.81	0.29	5.021	0.80	08FOR
277	Rb2CO3(2000H2O) = Rb2CO3(ai) DECOMPOSITION PRESSURE 576-705 K, 2ND LAW CORRECTED TO 25°C	ΔH=	-0.84	0.13	.000	a	75NBS

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
278	Rb2CO3(5.76H2O) = Rb2CO3(200H2O) CONVERTED FROM 15°C WITH ΔCp = -20 CAL/(MOL K)	ΔH=	-4.52	0.21	.084	a	09FOR2
279	Rb2CO3(cr) = Rb2CO3(200H2O) CONVERTED FROM 15°C WITH ΔCp = -50 CAL/(MOL K)	ΔH=	-40.08	0.84	.502	a	09FOR2
280	Rb2CO3(200H2O) = Rb2CO3(2000H2O) ESTIMATED CONSTRAINT - SOLVED EXACTLY.	ΔH=	-2.1	0.4	.000	a	75NBS
281	Rb2CO3(cr) = Rb2CO3(ai) UNKNOWN EXTRAPOLATION TO INFINITE DILN. LISTED FOR INFORMATION ONLY.	ΔH=	-26.28	2.59	17.238	0.7	71RAF/MY
282	Rb2CO3:H2O(cr) = Rb2CO3(200H2O) + H2O(l) CONVERTED FROM 15°C WITH ΔCp = -40 CAL/(MOL K)	ΔH=	-13.72	0.63	.146	a	09FOR2
283	Rb2CO3:1.5H2O(cr) = Rb2CO3(200H2O) + 1.5 H2O(l) CONVERTED FROM 15°C WITH ΔCp = -35 CAL/(MOL K)	ΔH=	-0.67	0.42	.052	a	09FOR2
284	Rb2CO3:7/2H2O(cr) = Rb2CO3(200H2O) + 3.5 H2O(l) CONVERTED FROM 15°C WITH ΔCp = -15 CAL/(MOL K) *63CAR AND 67DOB/DZY* INDICATE NO 3.5 HYDRATE *SEE REWORKED EQN* FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.	ΔH=	14.43	0.42			09FOR2
285	Rb2CO3:3H2O(cr) = Rb2CO3(200H2O) + 3 H2O(l) REPORTED AS 3.5H2O. ASSUMED SAMPLE CONTAINED EXCESS H2O; CONVERTED FROM 15°C USING ΔCp=-20 CAL/(MOL K)	ΔH=	14.23	0.84	.188	a	09FOR2
286	RbOH(100H2O) + H2CO3(ao) = RbHCO3(2000H2O) + H2O(l) CONVERTED FROM 15°C WITH ΔCp = 15 CAL/(MOL K) LISTED FOR INFORMATION ONLY.	ΔH=	-45.52	0.29	2.071	0.50	09FOR4
287	RbHCO3(2000H2O) = RbHCO3(ai) ESTIMATED CONSTRAINT - SOLVED EXACTLY.	ΔH=	-1.3	0.4	.084	a	75NBS
288	RbHCO3(200H2O) = RbHCO3(2000H2O) ESTIMATED CONSTRAINT - SOLVED EXACTLY.	ΔH=	-1.7	0.4	.000	a	75NBS
289	C2H5ORb:C2H5OH(cr) + 0.5 H2SO4(1100H2O) = 2 C2H5OH(1000H2O) + 0.5 Rb2SO4(cr) COMBINING HEATS OF SOLUTION, INCLUDING 74BLA/JOL. CORRECTED FOR DIFFERENTIAL HEAT OF SOLUTION OF H2SO4	ΔH=	-131.63	2.93	.100	a	76BOU/BLA
290	3Rb2CO3:2RbHCO3:4.5H2O(cr) = 3 Rb2CO3(200H2O) + 2 RbHCO3(200H2O) + 4.5 H2O(l) CONVERTED FROM 15°C WITH ΔCp = -150 CAL/(MOL K)	ΔH=	25.9	0.8	.073	a	09FOR3

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
291	RbHCO3(cr) = RbHCO3(ai)	ΔH=	19.79	1.26	-.209	1.1	71RAF/MY
292	2 RbHCO3(cr) = Rb2CO3(cr) + H2O(g) + CO2(g) DECOMPOSITION PRESSURES 150-170°C, REDUCED (2ND LAW) TO 25°C	ΔH=	157.7	2.1	2.707	1.1	14CAV/SAN
293	2 RbHCO3(cr) = Rb2CO3(cr) + CO2(g) + H2O(g) At 0.1 MPa. DECOMPOSITION PRESSURES 150-170°C, REDUCED (2ND LAW) TO 25°C	ΔG=	52.74	4.18	-.385	a	14CAV/SAN
294	RbHCO3(cr) = RbHCO3(200H2O) CONVERTED FROM 15°C WITH ΔCp = -33 CAL/(MOL K) LISTED FOR INFORMATION ONLY.	ΔH=	16.7	2.1	-6.276	1.7	09FOR4
295	RbO2CCF3(cr) = RbO2CCF3(aq) NO SOLUTION FOR VARIABLE OR DATA MISSING.	ΔH=	7.91	0.42			66WU/FRI
296	RbO2CCF3(cr) = RbO2CCF3(CH3OH:u) METHANOL NO SOLUTION FOR VARIABLE OR DATA MISSING.	ΔH=	1.38	0.63			71KRI/FRI2
297	RbO2CCF3(cr) = RbO2CCF3(HCON(CH3)2:u) DIMETHYLFORMAMIDE NO SOLUTION FOR VARIABLE OR DATA MISSING.	ΔH=	-3 .93	0.63			71KRI/FRI
298	RbCN(cr) H-H(0 K) = 4.159±0.010 KCAL/MOL, Cp = 16.20±0.02 CAL/(MOL K)	S=	140.88	0.21	.000	a	68SUG/MAT
299	RbCNS:0.5SO2(cr) = RbCNS(cr) + 0.5 SO2(g) NO SOLUTION FOR VARIABLE OR DATA MISSING.	ΔH=	22.2	2.1			16EPH/KOR
300	Rb2SiF6(cr) = 2 RbF(cr) + SiF4(g) 977-1113 K, REDUCED (2ND LAW) TO 25°C	ΔH=	181.2	6.3	-.084	a	45CAI
301	Rb2GeCl6(cr) = 2 RbCl(cr) + GeCl4(g) EQUATION, 90-135°C, REDUCED TO 25°C	ΔH=	97.9	3.3	.000	a	63KLA
302	Rb2GeCl6(cr) = 2 RbCl(cr) + GeCl4(g) At 0.1 MPa. EQUATION, 90-135°C, REDUCED TO 25°C	ΔG=	27.2	2.1	-.251	a	63KLA
303	Rb2SnCl6(cr) Cp = 54.27±0.05 CAL/(MOL K)	S=	377.61	0.21	.000	a	60MOR/STA
304	Rb2SnCl6(cr) = 2 RbCl(cr) + SnCl4(g) DECOMPOSITION PRESSURES 454-697 K, REDUCED (2ND LAW) TO 25°C	ΔH=	180.7	4.2	.000	a	63MOR/LI
305	RbSnBr3(g) = RbBr(g) + SnBr2(g) EQUILIBRIUM 770-1000 K CORRECTED (2ND LAW) TO 25°C NO SOLUTION FOR VARIABLE OR DATA MISSING.	ΔH=	17.	13.			71KAR/DOG
306	Rb2SnBr6(cr) Cp = 54.54±0.05 CAL/(MOL K)	S=	445.2	0.4	.000	a	60MOR/STA

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
307	RbCl(g) + PbCl2(g) = RbPbCl3(g)	ΔH=	-177.8	29.3			68BLO/HAS
	FROM MASS SPECT STUDY OF VAPORIZATION OF MIXTURES 740-910 K, CORR TO 25°C USING ΔCp = -4 CAL/(MOL K)						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
308	PbI2:2RbI(cr) = PbI2(cr) + 2 RbI(cr)	ΔH=	-390.16	0.84	.209	a	97MOS
	FROM COMBINING HEAT OF SOLUTION OF RBI AND COMPOUND						
309	PbI2:2RbI:4H2O(cr) = PbI2(cr) + 2 RbI(cr) + 4 H2O(l)	ΔH=	58.99	0.42	-.167	a	97MOS
	FROM COMBINING HEAT OF SOLUTION OF RBI AND COMPOUND						
310	RbBO2(cr)	S=	94.31	0.25	.000	a	71PAU/KHR2
	H-H(0 K) = 3.181±0.010 KCAL/MOL, Cp = 17.7±0.1 CAL/(MOL K)						
311	RbBO2(cr) = RbBO2(g)	ΔH=	298.3	8.4	.000	a	71GOR/GUS
	CORRECTED FROM 0 K						
312	Rb(cr) + O2(g) + B(cr) = RbBO2(cr)	ΔH=	-970.7	20.9	.000	a	77NBS
	BASED ON 74MAK/NIK REPORTED VALUES FOR THE GAS, BASED ON MAKAROV'S THESIS DATA FOR SOLID AND 71GOR/GUS HEATS OF SUBLIMATION, CORRECTED FROM 0 K TO 298 K						
313	RbBO2(g)	S=	308.26	0.42	.000	a	77NBS
	At 0.1 MPa.						
	H-H(0 K) = 3.43±0.05 KCAL/MOL, Cp = 14.17±0.15 CAL/(MOL K)						
	STRUCTURE FROM 73EZH/KOM, FREQUENCIES FROM 69SES/NIM						
314	RbF(cr) + BF3(g) = RbBF4(cr)	ΔH=	-185.4	10.5	-.209	a	72KUT
	FROM HEATS OF SOLUTION, NOT GIVEN.						
315	RbBCl4(cr) + 3 H2O(l) = RbCl(2500H2O) + 3 HCl(2500H2O) + H3BO3(10000H2O)	ΔH=	-210.0	1.3	.167	a	75FIN/GAR
316	RbBCl4(cr) + 3 NaOH(550H2O) = RbCl(cr) + 3 NaCl(cr) + H3BO3(cr)	ΔH=	-423.17	2.09	7.477	1.7	73KRI/TIT
	FROM COMBINING 4 HEATS OF SOLUTION						
317	RbB(ClO4)4(cr) + 3 NaOH(550H2O) = RbClO4(cr) + 3 NaClO4(cr) + H3BO3(cr)	ΔH=	-495.59	5.23	-.197	a	73KRI/BAB
	COMBINING HEATS OF SOLUTION						
318	2 RbAl(SeO4)2:12H2O(cr) = Rb2SeO4(aq) + Al2(SeO4)3(aq) + 24 H2O(l)	ΔH=	84.5	3.3	.251	a	71BOL/ZAL
319	Rb2ZnCl4(cr) = 2 RbCl(cr) + ZnCl2(2000H2O)	ΔH=	-20.75	0.04	-.042	0.10	64PAO/VAC
320	Rb2ZnBr4(cr) = 2 RbBr(1000H2O) + ZnBr2(cr)	ΔH=	85.94	0.08	-.008	0.15	65PAO
321	Rb2SO4:ZnSO4:6H2O(cr) = Rb2SO4:ZnSO4:2H2O(cr) + 4 H2O(g)	ΔG=	58.4	2.5			24CAV/FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 33-81°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
322	$Rb_2SO_4:ZnSO_4:6H_2O(cr) = Rb_2SO_4:ZnSO_4:2H_2O(cr) + 4\ H_2O(g)$	$\Delta H=$	262.3	5.0			24CAV/FER
	DECOMPOSITION PRESSURES 33-81°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
323	$RbCl(cr) + ZnSO_4(cr) = RbCl:ZnSO_4(cr)$	$\Delta H=$	-30.96	0.17	.209	0.33	55VOS/PAT
	COMBINATION OF HEATS OF SOLUTION OF MIXTURE AND COMPLEX						
324	$Rb_2SO_4:CdSO_4:6H_2O(cr) = Rb_2SO_4:CdSO_4:2H_2O(cr) + 4\ H_2O(g)$	$\Delta G=$	37.02	2.93			24CAV/FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 28-67°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
325	$Rb_2SO_4:CdSO_4:6H_2O(cr) = Rb_2SO_4:CdSO_4:2H_2O(cr) + 4\ H_2O(g)$	$\Delta H=$	190.4	6.3			24CAV/FER
	DECOMPOSITION PRESSURES 28-67°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
326	$CuCl_2:2RbCl(cr) = 2\ RbCl(400H_2O) + CuCl_2(800H_2O)$	$\Delta H=$	7.82	0.42	.092	a	23BOU/CHA
327	$CuCl_2:2RbCl(cr) = 2\ RbCl(400H_2O) + CuCl_2(800H_2O)$	$\Delta H=$	7.82	0.42	.092	a	29BOU/CHA
	SAME DATA AS 23BOU/CHA						
	LISTED FOR INFORMATION ONLY.						
328	$CuCl_2:2RbCl:4H_2O(cr) = 2\ RbCl(400H_2O) + CuCl_2(800H_2O) + 4\ H_2O(l)$	$\Delta H=$	39.50	0.42	-.201	a	23BOU/CHA
329	$CuCl_2:2RbCl:4H_2O(cr) = 2\ RbCl(400H_2O) + CuCl_2(800H_2O) + 4\ H_2O(l)$	$\Delta H=$	39.50	0.42	-.201	a	29BOU/CHA
	SAME DATA AS 23BOU/CHA						
	LISTED FOR INFORMATION ONLY.						
330	$Rb_2SO_4:CuSO_4:6H_2O(cr) = Rb_2SO_4:CuSO_4:2H_2O(cr) + 4\ H_2O(g)$	$\Delta H=$	248.5	5.0			22CAV/FER
	DECOMPOSITION PRESSURES 20-70°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
331	$Rb_2SO_4:CuSO_4:6H_2O(cr) = Rb_2SO_4:CuSO_4:2H_2O(cr) + 4\ H_2O(g)$	$\Delta G=$	48.4	2.5			22CAV/FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 20-70°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
332	$Rb_2SeO_4:CuSeO_4:6H_2O(cr) = Rb_2SeO_4:CuSeO_4:2H_2O(cr) + 4\ H_2O(g)$	$\Delta G=$	45.1	2.5			25FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 25-75°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
333	$Rb_2SeO_4:CuSeO_4:6H_2O(cr) = Rb_2SeO_4:CuSeO_4:2H_2O(cr) + 4\ H_2O(g)$	ΔH=	219.2	5.0			25FER
	DECOMPOSITION PRESSURES 25-75°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
334	$RbAg_4I_5(cr)$	S=	623.	4.	.000	a	69JOH/WIE
	H-H(0 K) = 17.092±0.01 KCAL/MOL, Cp = 68.24±0.05 CAL/(MOL K)						
	CORRECTED TO ALLOW FOR ZERO POINT ENTROPY						
335	$RbI(cr) + 4\ AgI(cr) = RbAg_4I_5(cr)$	ΔS=	38.5	5.4	-4.602	a	68TOP/OWE
	FROM SOLID ELECTROLYTE CELLS						
336	$RbI(cr) + 4\ AgI(cr) = RbAg_4I_5(cr)$	ΔG=	-4.632	0.628	.054	a	68TOP/OWE
	FROM SOLID ELECTROLYTE CELL						
337	$3.5\ AgI(cr) + 0.5\ Rb_2AgI_3(cr) = RbAg_4I_5(cr)$	ΔG=	0.075	0.209	.201	0.4	68TOP/OWE
	SOLID STATE CELL						
338	$3.5\ AgI(cr) + 0.5\ Rb_2AgI_3(cr) = RbAg_4I_5(cr)$	ΔS=	41.4	4.2	.000	a	68TOP/OWE
	SOLID STATE CELLS						
339	$RbNiCl_3(cr) = RbCl(ai) + NiCl_2(cr)$	ΔH=	41.0	0.4	-3.531	0.6	70EFI/KUD
	ADDING HEATS OF SOLN. OF COMPOUND AND $NiCl_2$						
340	$RbCl(cr) + NiCl_2(cr) = RbNiCl_3(cr)$	ΔH=	-27.49	0.59	.016	0.6	75WEE/KOE
	COMBINING ENTHALPIES OF SOLUTION IN 0.1N HCl						
341	$Rb_2SO_4:NiSO_4:6H_2O(cr) = Rb_2SO_4:NiSO_4:2H_2O(cr) + 4\ H_2O(g)$	ΔH=	245.6	5.0			24CAV/FER
	DECOMPOSITION PRESSURES 32-75°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
342	$Rb_2SO_4:NiSO_4:6H_2O(cr) = Rb_2SO_4:NiSO_4:2H_2O(cr) + 4\ H_2O(g)$	ΔG=	60.5	2.5			24CAV/FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 32-75°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
343	$Rb_2SeO_4:NiSeO_4:6H_2O(cr) = Rb_2SeO_4:NiSeO_4:2H_2O(cr) + 4\ H_2O(g)$	ΔH=	246.9	5.0			25FER
	DECOMPOSITION PRESSURES 30-76°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING						
344	$Rb_2SeO_4:NiSeO_4:6H_2O(cr) = Rb_2SeO_4:NiSeO_4:2H_2O(cr) + 4\ H_2O(g)$	ΔG=	65.1	2.5			25FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 30-76°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING						
345	$RbCoCl_3(cr) = RbCl(ai) + CoCl_2(cr)$	ΔH=	41.0	0.8	.335	a	70EFI/KUD
	ADDING HEATS OF SOLN OF COMPOUND AND $CoCl_2$						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
346	Rb2CoCl4(cr) = 2 RbCl(ai) + CoCl2(cr) ADDING HEATS OF SOLUTION OF COMPOUND AND CoCl2	ΔH=	58.6	0.8	1.088	0.5	70EFI/KUD
347	Rb2CoCl4(cr) = 2 RbCl(1000H2O) + CoCl2(2000H2O)	ΔH=	-21.09	0.29	-.226	0.5	64PAO/VAC
348	Rb3CoCl5(cr) = 3 RbCl(ai) + CoCl2(cr) ADDING HEATS OF SOLUTION OF COMPOUND AND CoCl2	ΔH=	80.96	1.05	-.042	a	70EFI/KUD
349	Rb2SO4:CoSO4:6H2O(cr) = Rb2SO4:CoSO4:2H2O(cr) + 4 H2O(g) DECOMPOSITION PRESSURES 27-76°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	238.5	5.0			24CAV/FER
350	Rb2SO4:CoSO4:6H2O(cr) = Rb2SO4:CoSO4:2H2O(cr) + 4 H2O(g) At 0.1 MPa. DECOMPOSITION PRESSURES 27-76°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔG=	53.4	2.5			24CAV/FER
351	RbFeCl3(cr) = RbCl(1000H2O) + FeCl2(1000H2O)	ΔH=	-39.7	0.4	.013	a	68SOR/TRO
352	Rb2FeCl4(cr) = FeCl2(1000H2O) + 2 RbCl(1000H2O)	ΔH=	-23.4	0.8	.109	a	68SOR/TRO
353	Rb2PtCl4(cr) = 2 Rb+(ao) + PtCl4-2(ao)	ΔH=	63.05	0.42	.126	a	65PAL/KUZ
354	Rb2PtCl6(cr) = 2 Rb+(ao) + PtCl6-2(ao) SOLUBILITY AS FUNCTION OF TEMPERATURE	ΔH=	74.9	6.3	-.167	a	25ARC/HAL
355	Rb2PtCl6(cr) = 2 Rb+(ao) + PtCl6-2(ao) FROM SOLUBILITY	ΔG=	58.83	1.26	.000	a	25ARC/HAL
356	RbPtNH3Cl3(cr) = Rb+(ao) + PtNH3Cl3-(ao)	ΔH=	45.31	0.63	-.167	a	65PAL/KUZ
357	Rb2IrCl6(cr) = 2 RbCl(cr) + Ir(cr) + 2 Cl2(g) DECOMPOSITION PRESSURES 619-880°C REDUCED (2ND LAW) TO 25°C	ΔH=	309.6	12.6	.418	a	38PUC
358	RbMnCl3(cr) = RbCl(cr) + MnCl2(cr) COMBINING HEATS OF SOLN. OF PRODUCT AND REACTANTS	ΔH=	25.98	0.25	-.042	a	65EHR/KOK
359	Rb2SO4:MnSO4:6H2O(cr) = Rb2SO4:MnSO4:2H2O(cr) + 4 H2O(g) DECOMPOSITION PRESSURE 27-90°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	205.0	8.4			24CAV/FER
360	Rb2SO4:MnSO4:6H2O(cr) = Rb2SO4:MnSO4:2H2O(cr) + 4 H2O(g) At 0.1 MPa. DECOMPOSITION PRESSURE 27-90°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔG=	38.4	4.2			24CAV/FER
361	RbReO4(cr) = RbReO4(ai) FROM SOLUBILITY AS FUNCTION OF TEMPERATURE	ΔH=	64.27	2.09	-.167	a	48SMI/LON

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
362	RbReO4(cr) = RbReO4(ai) USING GAMMA AS 0.79, SOLUBILITY AS 0.0380M	ΔG=	17.36	1.26	-.209	a	48SMI/LON
363	Rb2CrO4(cr) + RbF(cr) = Rb3CrO4F(cr) FROM HEATS OF SOLN. OF COMPOUND AND MIXTURE OF SALTS	ΔH=	-3.26	0.63	.084	a	51SCH/WEE
364	Rb2CrO4(cr) = 2 Rb+(ao) + CrO4-2(ao) ESTIMATED FROM SOLN. OF MIXTURE OF RbF AND Rb2CrO4	ΔH=	30.5	0.8	-.167	a	51SCH/WEE
365	Rb3CrCl6(cr) = 3 RbCl(cr) + CrCl3(cr) COMBINED WITH HEATS OF SOLUTION FROM 66SHC/VAS FOR COMPONENTS	ΔH=	69.0	2.5	1.883	1.3	69VAS/EFI
366	3 RbCl(cr) + 2 CrCl3(cr) = Rb3Cr2Cl9(cr) COMBINING HEATS OF SOLN. INTO 0.12N HCL	ΔH=	-107.9	2.5	.209	a	66SHC/VAS
367	3 RbCl(cr) + CrCl3(cr) = Rb3CrCl6(cr) COMBINING HEATS OF SOLN. INTO 0.12N HCL	ΔH=	-66.9	1.7	.209	b	66SHC/VAS
368	2 RbWF6(cr) + ClO-(ao) + 14 OH-(ao) = RbCl(ai) + 2 WO4-2(ao) + (12F:Rb:7H2O)-11(aq)	ΔH=	-1010.	18.	.164	a	74BUR/HAI
369	(12F:Rb:7H2O)-11(aq) = 11 F-(ao) + RbF(ai) + 7 H2O(l) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		74BUR/HAI
370	2 RbMoF6(cr) + ClO-(ao) + 14 OH-(ao) = RbCl(ai) + 2 MoO4-2(ao) + (12F:Rb:7H2O)-11(aq)	ΔH=	-1154.	16.	.094	a	74BUR/HAI
371	(12F:Rb:7H2O)-11(aq) = 11 F-(ao) + RbF(ai) + 7 H2O(l) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		74BUR/HAI
372	Rb3VCl6(cr) = 3 RbCl(1000H2O) + VCl3(cr) USING HEAT OF REACTION WITH KOH(+H2O2) PLUS VCl3 WITH SAME SOLN. FROM 62SHC/VAS	ΔH=	135.1	3.3	-.130	a	65VAS/PER
373	Rb3V2Cl9(cr) = 3 RbCl(1000H2O) + 2 VCl3(cr) USING HEAT OF REACTION WITH KOH(+H2O2) AND VCl3 WITH SAME SOLN. FROM 62SHC/VAS	ΔH=	164.0	4.2	-.130	a	65VAS/PER
374	RbNbO3(cr) = Rb+(ao) + NbO3-(ao) FROM SOLUBILITY	ΔG=	45.2	1.3	-.126	a	55LAP/SHI
375	RbNbO3(cr) = Rb+(ao) + NbO3-(ao) SOLUBILITY 20-30°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	38.9	2.1			60LAP/STR
376	RbNbCl6(cr) = RbCl(cr) + NbCl5(cr) COMBINED WITH HEATS OF SOLN OF RbCl AND NbCl5 FROM 60SHC/ORA AND 60SHC/SAM	ΔH=	52.3	2.9	.209	a	64SMI/VAS
377	2 Rb2NbCl6(cr) = 2 RbCl(cr) + Rb2NbCl5(cr) + NbCl5(g) DECOMPOSITION PRESSURES 540-590°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	236.4	25.1			65SAF/KOR

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
378	Rb2NbOCl5(cr) = 2 RbCl(cr) + NbOCl3(g) DECOMPOSITION PRESSURE 515-740°C (MP 570°C) REDUCED TO 25°C	ΔH=	151.	21.	-23.849	6.7	63MOR/KRO
379	NbOCl3(cr) + 2 RbCl(ai) = Rb2NbOCl5(cr) COMBINING HEATS OF SOLUTION	ΔH=	-81.6	2.5	-.251	2.5	69VAS/SMI
380	RbTaO3(cr) = Rb+(ao) + TaO3-(ao) SOLUBILITY 20-30°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔG=	50.6	0.8			60LAP/STR
381	RbTaO3(cr) = Rb+(ao) + TaO3-(ao) SOLUBILITY 20-30°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	51.5	2.1			60LAP/STR
382	8 RbTaO2Cl2(cr) = RbTa2OCl9(g) + 3 Ta2O5(cr) + 7 RbCl(cr) REDUCED FROM 715°C WITH ΔCp = -20 CAL/(MOL K) NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	162.3	29.3			74MOR
383	Rb2TiF6(cr) + H2O(g) = Rb2TiOF4(cr) + 2 HF(g) EQUILIBRIUM 350-500°C, REDUCED(2ND LAW) TO 25°C NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	143.1	4.2			71SKL/MIK
384	RbTiCl3(cr) = RbCl(cr) + TiCl2(cr) FROM COMBINING HEATS OF SOLUTION IN HCl-FeCl3	ΔH=	97.1	3.3	-.209	a	67KOR/ZAK
385	Rb2TiCl4(cr) = 2 RbCl(cr) + TiCl2(cr) FROM COMBININB HEATS OF SOLUTION IN HCl-FeCl3	ΔH=	113.4	5.4	.000	a	67KOR/ZAK
386	RbTaCl6(cr) = RbCl(cr) + TaCl5(cr) COMBINED WITH HEATS OF SOLN OF RbCl AND TaCl5 FROM 60SHC/ORA AND 60SHC/SMI	ΔH=	73.2	2.9	-.209	a	64SMI/VAS
387	Rb2TiCl6(cr) = 2 RbCl(cr) + TiCl4(g) FROM THEIR EQUATION, CORR. TO 25°C	ΔH=	156.9	10.5	12.552	10.0	54EHR/FRA
388	Rb2TiCl6(cr) = 2 RbCl(cr) + TiCl4(g) DECOMP. PRESS. 400-600°C, CORR. TO 25°C	ΔH=	151.0	6.3	6.694	b	60MOR/TOP
389	TiCl2(cr) + FeCl3(1500H2O:54HCl) + HCl(25H2O) + 2 RbCl(cr) = FeCl2(1000H2O) + Rb2TiCl6(cr) + 0.5 H2(g) COMBINING THREE HEATS OF SOLN.	ΔH=	-123.4	6.3	8.795	10.5	67KOR/ZAK
390	Rb2TiBr6(cr) = 2 RbBr(cr) + TiBr4(cr) COMBINING HEATS SOLN. REACTANT AND PRODUCTS IN HCl-FeCl3 SOLN.	ΔH=	99.2	1.7	.084	a	64SHC/VAS
391	3 RbBr(cr) + TiBr3(cr) = Rb3TiBr6(cr) COMBINING HEATS OF SOLN. OF REACTANTS AND PRODUCT IN HCl-FeCl3 SOLN.	ΔH=	-49.58	2.09	.084	a	64SHC/VAS

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
392	3 RbBr(cr) + 2 TiBr3(cr) = Rb3Ti2Br9(cr) COMBINING HEATS OF SOLN. OF REACTANTS AND PRODUCT IN HCl-FeCl3 SOLN.	ΔH=	-76.78	2.51	.084	a	64SHC/VAS
393	RbGd(Fe(CN)6)(cr) = Rb+(ao) + Gd+3(ao) + Fe(CN)6-4(ao) FROM SOLUBILITY	ΔG=	67.15	2.09	-.293	a	61GLU/PET
394	RbCe(Fe(CN)6):2H2O(cr) = 2 H2O(l) + Rb+(ao) + Ce+3(ao) + Fe(CN)6-4(ao) SOLUBILITY	ΔG=	71.1	2.1	-.192	a	56TAN/SEI
395	UCl4(cr) + 0.5 H2O2(50H2O) + 5 KF(cr) + RbF(cr) = KOH(100H2O) + RbUF6(cr)+ 4 KCl(cr) COMBINING HEATS OF SOLUTION AND OF REACTION WITH K2CO3(AQ)	ΔH=	-444.3	4.2	.044	a	78KUD/SUG2
396	RbF(cr) + 2 UO2F2(cr) = Rb(UO2)2F5(cr) COMBINING HEATS OF SOLUTION IN 2m HCl	ΔH=	-97.40	2.59	.084	a	74SUP/SEL
397	3 RbF(cr) + UO2F2(cr) = Rb3UO2F5(cr) COMBINING HEATS OF SOLUTION IN 2N HCl	ΔH=	-137.86	1.84	.209	a	74MUK/SUP
398	5 RbF(cr) + 2 UO2F2(cr) = Rb5(UO2)2F9(cr) COMBINING HEATS OF SOLUTION IN 2N HCl	ΔH=	-265.18	6.23	.084	a	74MUK/SEL
399	RbCl(cr) + UCl4(cr) = RbUCl5(cr) COMBINING HEATS OF SOLUTION IN HCl	ΔH=	-43.9	3.3	.209	a	74VDO/VOL
400	UCl4(cr) + FeCl3(cr) + RbCl(cr) = RbUCl6(cr) + FeCl2(cr) COMBINING HEATS OF SOLUTION	ΔH=	-42.7	1.7	-.167	a	78KUD/SUG
401	2 RbCl(cr) + UCl4(cr) = Rb2UCl6(cr) COMBINING HEATS OF SOLUTION IN HCl	ΔH=	-67.8	2.5	.000	a	74VDO/VOL
402	4 RbCl(cr) + UCl4(cr) = Rb4UCl8(cr) COMBINING HEATS OF SOLUTION IN HCl	ΔH=	-68.6	3.3	.000	a	74VDO/VOL
403	2 RbBr(cr) + UBr4(cr) = Rb2UBr6(cr) COMBINING HEATS OF SOLUTION	ΔH=	-62.17	0.63	.084	a	73VDO/SUG
404	Rb2ThCl6(cr) = 2 RbCl(cr) + ThCl4(cr) COMBINING HEATS OF SOLN., USING CHAUVENET'S VALUE FOR ThCl4. CONVERTED FROM 15°C WITH ΔCp = 0 CAL/(MOL K)	ΔH=	84.5	3.3	.000	a	11CHA
405	Rb2ThCl6:9H2O(cr) = 9 H2O(l) + 2 RbCl(cr) + ThCl4(cr) COMBINING HEATS OF SOLN., USING CHAUVENET'S VALUE FOR ThCl4 CONVERTED FROM 15°C WITH ΔCp = 90 CAL/(MOL K)	ΔH=	200.8	6.3	.146	a	11CHA

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
406	$Rb_4ThCl_8(cr) = 4\ RbCl(cr) + ThCl_4(cr)$	ΔH=	117.2	4.2	-.418	a	11CHA
	COMBINING HEATS OF SOLN., USING CHAUVENET'S VALUE FOR ThCl4						
407	$Rb_2SO_4:MgSO_4:6H_2O(cr) = Rb_2SO_4:MgSO_4:4H_2O(cr) + 2\ H_2O(g)$	ΔH=	106.7	5.0			24CAV/FER
	DECOMPOSITION PRESSURES 29-67°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING						
408	$Rb_2SO_4:MgSO_4:6H_2O(cr) = Rb_2SO_4:MgSO_4:4H_2O(cr) + 2\ H_2O(g)$	ΔG=	22.1	2.5			24CAV/FER
	At 0.1 MPa.						
	DECOMPOSITION PRESSURES 29-67°C						
	NO SOLUTION FOR VARIABLE OR DATA MISSING						
409	$2\ Pb(NO_3)_2(3200H_2O) + Rb_2Mg(SeO_4)_2:6H_2O(cr) = 2\ PbSeO_4(cr) + 2\ RbNO_3(3200H_2O) + Mg(NO_3)_2(6400\ H_2O) + 6\ H_2O(l)$	ΔH=	31.75	0.08	1.389	0.00	71PRY/SEL
	REACTION REWRITTEN, SEE OTHER REACTION.						
	FOR INFORMATION ONLY.						
410	$Rb_2Mg(SeO_4)_2:6H_2O(cr) + 4\ HNO_3(500H_2O) = 2\ H_2SeO_4(7.85H_2O) + 2\ RbNO_3(3200H_2O) + Mg(NO_3)_2(6400H_2O) + 6\ H_2O(l)$	ΔH=	113.55	0.29	.042	0.30	71PRY/SEL
	USING $Pb(NO_3)_2 + H_2SeO_4$ FROM 59SEL/KAP						
411	$Rb_2Mg(SeO_4)_2:6H_2O(cr) = Rb_2Mg(SeO_4)_2(6400H_2O) + 6\ H_2O(l)$	ΔH=	43.22	0.25	.084	0.30	71PRY/SEL
412	$RbCaCl_3(cr) = RbCl(1000H_2O) + CaCl_2(1000H_2O)$	ΔH=	-40.6	0.4	-.075	a	70SOR/SMI
413	$RbNO_2:2Ba(NO_2)_2(cr) = RbNO_2(cr) + 2\ Ba(NO_2)_2(cr)$	ΔH=	-6.812	0.209			62PRO/AND
	COMBINING HEATS OF SOLUTION OF COMPOUND AND MIXTURE						
	SEE COMMENTS ON ΔsolnH OF $RbNO_2(cr)$						
	FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.						
414	$Ba(NO_2)_2:2RbNO_2(cr) = Ba(NO_2)_2(cr) + 2\ RbNO_2(cr)$	ΔH=	28.639	0.209			62PRO/AND
	COMBINING HEATS OF SOLN. OF MIXTURE AND COMPOUND						
	SEE COMMENTS ON ΔsolnH OF $RbNO_2(cr)$						
	FOR INFORMATION ONLY. ALSO, VARIABLE NOT SOLVED OR DATA MISSING.						
415	$Ba(NO_2)_2:2RbNO_2(cr) = Ba(NO_2)_2(ai) + 2\ RbNO_2(ai)$	ΔH=	74.5	1.7	.000	a	62PRO/AND
416	$RbNO_2:2Ba(NO_2)_2(cr) = RbNO_2(ai) + 2\ Ba(NO_2)_2(ai)$	ΔH=	54.0	1.7	.000	a	62PRO/AND
417	$RbBr(g) + NaBr(g) = RbNaBr_2(g)$	ΔH=	-230.1	41.8	-.335	a	68GUI/HEN
	FROM MASS SPECTRAL STUDIES AT 1300-1400 K OVER MIXTURES						
418	$3\ NaCl(cr) + CrCl_3(cr) + 2\ Rb_3CrCl_6(cr) = 3\ NaRb_2CrCl_6(cr)$	ΔH=	-80.3	4.2	.402	a	69VAS/EFI
	HEATS OF SOLUTION COMBINED WITH DATA FROM 66SHC/VAS						
419	$RbCl(cr) + KCl(cr) = RbKCl_2(cr)$	ΔH=	-1.849	0.033	-.029	0.20	49FON/HOV
	FROM HEATS OF SOLN.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
420	RbCl(cr) + KCl(cr) = RbKCl2(cr) FROM HEATS OF SOLN.	ΔH=	-1.695	0.042	.126	b	39FON
421	RbKCl2(g) = KCl(g) + RbCl(g)	ΔH=	167.	25.	-.084	a	64KUZ/NOV
422	Rb+(ao) + OH-(ao) = RbOH(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
423	Rb+(ao) + OH-(ao) = RbOH(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	-.017		.DEFINED
424	Rb+(ao) + OH-(ao) = RbOH(ai) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.000		.DEFINED
425	RbF(ai) = Rb+(ao) + F-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
426	RbF(ai) = Rb+(ao) + F-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
427	RbF(ai) = Rb+(ao) + F-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	-.167		.DEFINED
428	Rb+(ao) + Cl-(ao) = RbCl(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	-.008		.DEFINED
429	Rb+(ao) + Cl-(ao) = RbCl(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	-.008		.DEFINED
430	Rb+(ao) + Cl-(ao) = RbCl(ai) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.000		.DEFINED
431	Rb+(ao) + ClO3-(ao) = RbClO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
432	Rb+(ao) + ClO3-(ao) = RbClO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
433	Rb+(ao) + ClO3-(ao) = RbClO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.167		.DEFINED
434	Rb+(ao) + ClO4-(ao) = RbClO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
435	Rb+(ao) + ClO4-(ao) = RbClO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
436	RbClO4(ai) = Rb+(ao) + ClO4-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	-.167		.DEFINED
437	Rb+(ao) + Br-(ao) = RbBr(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
438	Rb+(ao) + Br-(ao) = RbBr(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
439	Rb+(ao) + Br-(ao) = RbBr(ai) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.000		.DEFINED
440	RbBrO3(ai) = Rb+(ao) + BrO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
441	RbBrO3(ai) = Rb+(ao) + BrO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
442	Rb+(ao) + BrO3-(ao) = RbBrO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.000		.DEFINED
443	Rb+(ao) + I-(ao) = RbI(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
444	Rb+(ao) + I-(ao) = RbI(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
445	Rb+(ao) + I-(ao) = RbI(ai) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.167		.DEFINED
446	Rb+(ao) + IO3-(ao) = RbIO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	-.126		.DEFINED
447	Rb+(ao) + IO3-(ao) = RbIO3(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.126		.DEFINED
448	RbIO3(ai) = Rb+(ao) + IO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	-.167		.DEFINED
449	Rb2S(ai) = 2 Rb+(ao) + S-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	-.167		.DEFINED
450	Rb2S(ai) = 2 Rb+(ao) + S-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.084		.DEFINED
451	2 Rb+(ao) + S-2(ao) = Rb2S(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	-.167		.DEFINED
452	Rb2SO4(ai) = 2 Rb+(ao) + SO4-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
453	Rb2SO4(ai) = 2 Rb+(ao) + SO4-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
454	Rb2SO4(ai) = 2 Rb+(ao) + SO4-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.084		.DEFINED
455	Rb+(ao) + HSe-(ao) = RbHSe(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	-.126		.DEFINED

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
		kJ/mol or J/(mol K)					
456	RbN3(ai) = Rb+(ao) + N3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
457	RbNO2(ai) = Rb+(ao) + NO2-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.126		.DEFINED
458	RbNO2(ai) = Rb+(ao) + NO2-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	-.126		.DEFINED
459	RbNO2(ai) = Rb+(ao) + NO2-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	-.167		.DEFINED
460	RbNO3(ai) = Rb+(ao) + NO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
461	RbNO3(ai) = Rb+(ao) + NO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
462	RbNO3(ai) = Rb+(ao) + NO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	-.167		.DEFINED
463	Rb2CO3(ai) = 2 Rb+(ao) + CO3-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		DEFINED
464	Rb2CO3(ai) = 2 Rb+(ao) + CO3-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
465	Rb2CO3(ai) = 2 Rb+(ao) + CO3-2(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.084		.DEFINED
466	RbHCO3(ai) = Rb+(ao) + HCO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	.000		.DEFINED
467	RbHCO3(ai) = Rb+(ao) + HCO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.000		.DEFINED
468	RbHCO3(ai) = Rb+(ao) + HCO3-(ao) CONSTRAINT - SOLVED EXACTLY.	ΔS=	0.	0.	.000		.DEFINED
469	Rb+(ao) + ReO4-(ao) = RbReO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔH=	0.	0.	-.126		.DEFINED
470	Rb+(ao) + ReO4-(ao) = RbReO4(ai) CONSTRAINT - SOLVED EXACTLY.	ΔG=	0.	0.	.126		.DEFINED
471	RbNbO3(ai) = Rb+(ao) + NbO3-(ao) NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔH=	0.0	0.0			76NBS
472	RbNbO3(ai) = Rb+(ao) + NbO3-(ao) NO SOLUTION FOR VARIABLE OR DATA MISSING	ΔS=	0.0	0.0			76NBS

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
473	RbNbO3(ai) = Rb+(ao) + NbO3-(ao)	ΔG=	0.0	0.0	-.126		76NBS
	CONSTRAINT - SOLVED EXACTLY.						
474	Rb(cr) = Rb(cr)	ΔG=	0.0	0.0	.000		76NBS
	CONSTRAINT - SOLVED EXACTLY.						
475	Rb(cr) = Rb(cr)	ΔS=	0.0	0.0	.000		76NBS
	CONSTRAINT - SOLVED EXACTLY.						
476	Rb(cr) = Rb(cr)	ΔH=	0.0	0.0	.000		76NBS
	CONSTRAINT - SOLVED EXACTLY.						
477	Rb(cr) = Rb(g)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
478	Rb(cr) = Rb+(ao)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
479	Rb(cr) + 0.5 F2(g) = RbF(g)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
480	2 Rb(cr) + F2(g) = Rb2F2(g)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
481	Rb(cr) + F2(g) + 0.5 H2(g) = RbHF2(cr)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
482	Rb(cr) + 0.5 Cl2(g) = RbCl(cr)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
483	Rb(cr) + 0.5 Cl2(g) = RbCl(g)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
484	2 Rb(cr) + Cl2(g) = Rb2Cl2(g)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
485	Rb(cr) + 0.5 Cl2(g) + 1.5 O2(g) = RbClO3(cr)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
486	Rb(cr) + 0.5 Cl2(g) + 2 O2(g) = RbClO4(cr)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
487	Rb(cr) + 0.5 Br2(l) = RbBr(cr)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
488	Rb(cr) + 0.5 Br2(l) = RbBr(g)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						
489	Rb(cr) + 1.5 Br2(l) = RbBr3(cr)	HGS=	0.000	0.000			
	NO SOLUTION FOR VARIABLE OR DATA MISSING.						
490	Rb(cr) + 0.5 Br2(l) + 1.5 O2(g) = RbBrO3(cr)	HGS=	0.000	0.000	.000		
	CONSTRAINT - SOLVED EXACTLY.						

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
491	Rb(cr) + 0.5 Br2(l) + Cl2(g) = RbBrCl2(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
492	Rb(cr) + Br2(l) + 0.5 Cl2(g) = RbBr2Cl(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
493	Rb(cr) + 0.5 I2(cr) = RbI(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
494	Rb(cr) + 0.5 I2(cr) = RbI(g) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
495	Rb(cr) + 1.5 I2(cr) = RbI3(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
496	Rb(cr) + 0.5 I2(cr) + 1.5 O2(g) = RbIO3(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
497	Rb(cr) + 0.5 I2(cr) + 2 Cl2(g) = RbICl4(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
498	Rb(cr) + 0.5 I2(cr) + Br2(l) = RbIBr2(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
499	Rb(cr) + 2 S(cr) + 4 O2(g) = RbS2O8-(ao) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
500	2 Rb(cr) + S(cr) + 2 O2(g) = Rb2SO4(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
501	Rb(cr) + 0.5 N2(g) + O2(g) = RbNO2(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
502	Rb(cr) + 0.5 N2(g) + 1.5 O2(g) = RbNO3(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
503	Rb(cr) + P(cr) + 3 F2(g) = RbPF6(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
504	2 Rb(cr) + C(cr) + 1.5 O2(g) = Rb2CO3(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
505	Rb(cr) + C(cr) + 0.5 H2(g) + 1.5 O2(g) = RbHCO3(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
506	2 Rb(cr) + Ge(cr) + 3 Cl2(g) = Rb2GeCl6(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
507	2 Rb(cr) + Sn(cr) + 3 Cl2(g) = Rb2SnCl6(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
508	Rb(cr) + B(cr) + O2(g) = RbBO2(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
509	Rb(cr) + B(cr) + O2(g) = RbBO2(g) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
510	2 Rb(cr) + Zn(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:ZnSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
511	2 Rb(cr) + Zn(cr) + 2 S(cr) + 2 H2(g) + 5 O2(g) = Rb2SO4:ZnSO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
512	2 Rb(cr) + Cd(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:CdSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
513	2 Rb(cr) + Cd(cr) + 2 S(cr) + 2 H2(g) + 5 O2(g) = Rb2SO4:CdSO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	EGS=	0.000	0.000			
514	2 Rb(cr) + Cu(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:CuSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
515	2 Rb(cr) + Cu(cr) + 2 S(cr) + 2 H2(g) + 5 O2(g) = Rb2SO4:CuSO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
516	2 Rb(cr) + Cu(cr) + 2 Se(cr) + 6 H2(g) + 7 O2(g) = Rb2SeO4:CuSeO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
517	2 Rb(cr) + Cu(cr) + 2 Se(cr) + 2 H2(g) + 5 O2(g) = Rb2SeO4:CuSeO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
518	Rb(cr) + 4 Ag(cr) + 2.5 I2(cr) = RbAg4I5(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
519	2 Rb(cr) + Ag(cr) + 1.5 I2(cr) = Rb2AgI3(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
520	2 Rb(cr) + Ni(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:NiSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
521	2 Rb(cr) + Ni(cr) + 2 S(cr) + 2 H2(g) + 5 O2(g) = Rb2SO4:NiSO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
522	2 Rb(cr) + Ni(cr) + 2 Se(cr) + 6 H2(g) + 7 O2(g) = Rb2SeO4:NiSeO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			

Table 2. The Catalog of Thermochemical Measurements at 298.15 K - Continued

NO.	REACTION OR SUBSTANCE	PROP. MEAS.	OBSVD. VALUE	INIT. UNC.	RESID. OBS-CALC	EST. REL.	REF.
			kJ/mol or J/(mol K)				
523	2 Rb(cr) + Ni(cr) + 2 Se(cr) + 2 H2(g) + 5 O2(g) = Rb2SeO4:NiSeO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
524	2 Rb(cr) + Co(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:CoSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
525	2 Rb(cr) + Co(cr) + 2 S(cr) + 2 H2(g) + 5 O2(g) = Rb2SO4:CoSO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
526	2 Rb(cr) + Pt(cr) + 3 Cl2(g) = Rb2PtCl6(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
527	2 Rb(cr) + Mn(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:MnSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
528	2 Rb(cr) + Mn(cr) + 2 S(cr) + 2 H2(g) + 5 O2(g) = Rb2SO4:MnSO4:2H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
529	Rb(cr) + Re(cr) + 2 O2(g) = RbReO4(cr) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
530	Rb(cr) + Re(cr) + 2 O2(g) = RbReO4(ai) CONSTRAINT - SOLVED EXACTLY.	HGS=	0.000	0.000	.000		
531	Rb(cr) + Nb(cr) + 1.5 O2(g) = RbNbO3(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
532	Rb(cr) + Ta(cr) + 1.5 O2(g) = RbTaO3(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
533	2 Rb(cr) + Mg(cr) + 2 S(cr) + 6 H2(g) + 7 O2(g) = Rb2SO4:MgSO4:6H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			
534	2 Rb(cr) + Mg(cr) + 2 S(cr) + 4 H2(g) + 6 O2(g) = Rb2SO4:MgSO4:4H2O(cr) NO SOLUTION FOR VARIABLE OR DATA MISSING.	HGS=	0.000	0.000			

TABLE 3. Revisions and additions to the NBS Tables for rubidium compounds in SI units

Compound	Molar mass g/mol	$\Delta_f H°$ kJ/mol	$\Delta_f G°$	$S°$ J/(mol K)
RbS2O8—(ao)	277.5910	−1590.3	−1405.7	406.3
Rb2SeO3(cr)	297.8938	−972.78		
RbKCl2(g)	195.4758	−610.4		

TABLE 4. Auxiliary data used in the calculations interpolated from the NBS Tables

Compound	Molar mass g/mol	$\Delta_f H°$ kJ/mol	$\Delta_f G°$	$S°$ J/(mol K)
HCl(2500H2O)	36.4610	−166.879		
H2SO4(1100H2O)	98.0776	−892.615		
HNO3(4000H2O)	63.0129	−207.167		
Pb(NO3)2(265H2O)	331.1998	−422.6		
Pb(NO3)2(3200H2O)	331.1998	−419.2		
Al2(SeO4)3(aq)	482.8358	−2860.2		
ZnCl2(2000H2O)	136.2760	−486.39		
FeCl3(1500H2O:54HCl)	162.2060	−517.1		
Mg(NO3)2(6400H2O)	148.3218	−880.799		
NaOH(550H2O)	39.9972	−469.692		

10. Reference Codes and References for the Tables

(18)90BEK Beketoff, N.; Bull. Acad. Sci. St. Peter.; **33**, 173 (1890)
(18)94ETA Etard, A.; Ann. Chim. Phys.; [7] **2**, 503 (1894)
(18)97MOS Mosnier, A.; Ann. Chim. Phys.; [7] **12**, 374 (1897)
(19)04BER Berkeley, Earl of; Phil. Trans. Roy. Soc. (London); A 203, 189 (1904)
06FOR de Forcrand, R.; Compt. rend. ; **142**, 1252 (1906)
06FOR2 de Forcrand, R.; Compt. rend.; **143**, 98 (1906)
08FOO/CHA Foote, H. W.; Chalker, W. C.; Am. Chem. J.; **39**, 561 (1908)
08FOR de Forcrand, R.; Compt. rend.; **146**, 511 (1908)
08REN Rengade, E.; Ann. Chim. Phys.; [8] **14**, 540 (1908)
09FOR de Forcrand, R.; Compt. rend.; **149**, 1341 (1909)
09FOR2 de Forcrand, R.; Compt. rend.; **149**, 97 (1909)
09FOR3 de Forcrand, R.; Compt. rend.; **149**, 825 (1909)
09FOR4 de Forcrand, R.; Compt. rend.; **149**, 719 (1909)
10ZEM/RAM Zemczuzny, S.; Rambach, F.; Z. Anorg. Allgem. Chem.; **65**, 403 (1910)
11CHA Chauvenet, E.; Ann. Chim. Phys.; [8] **23**, 425 (1911)
11FOR de Forcrand, R.; Ann. Chim. Phys.; [8] **24**, 256 (1911)
11FOR2 de Forcrand, R.; Compt. rend.; **152**, 1208 (1911)
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14REN/COS Rengade, E.; Costeanu, N.; Bull. Soc. Chim. France; [4] **15**, 717 (1914)
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16EPH/KOR Ephraim, F.; Kornblum, J.; Ber.; **49**, 2007 (1916)
17EPH Ephraim, F.; Ber.; **50**, 1069 (1917)
19FOR/TAB de Forcrand, R.; Taboury, F.; Compt. rend.; **169**, 162 (1919)
21BUE/MCC Buell, H. D.; McCrosky, C. R; J. Am. Chem. Soc.; **43**, 2031 (1921)
21RUF/MUG Ruff, O.; Mugdan, S.; Z. Anorg. Allgem. Chem.; **117**, 147 (1921)
21WAR/SCH von Wartenberg, H.; Schulz, H.; Z. Elektrochem.; **27**, 568 (1921)
22CAV/FER Caven, R. M.; Ferguson, J.; J. Chem. Soc. (London); **121**, 1406 (1922)
22RUF/SCH Ruff, O.; Schmidt, G.; Mugdan, S.; Z. Anorg. Allgem. Chem.; **123**, 83 (1922)
23BOU/CHA Bouzat, A.; Chauvenet, E.; Compt. rend.; **177**, 1293 (1923)
24CAV/FER Caven, R. M.; Ferguson, J.; J. Chem. Soc. (London); **125**, 1307 (1924)
24SCO Scott, D. H.; Phil. Mag.; [6] **47**, 32 (1924)
25ARC/HAL Archibald, E. H.; Hallett, L. T.; J. Am. Chem. Soc.; **47**, 1314 (1925)
25FER Ferguson, J.; J. Chem. Soc. (London); **127**, 2096 (1925)
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68BLO/HAS Bloom, H.; Hastie, J. W.; J. Phys. Chem.; **72**, 2706 (1968)

68GUI/HEN Guion, J.; Hengstenberg, D.; Blander, M.; J. Phys. Chem.; **72**, 4620 (1968)

68HID/ORR Hidalgo, A. F.; Orr, C., Jr; J. Chem. Eng. Data; **13**, 49 (1968)

68MAK/STU Makarov, L. L.; Stupin, D. Yu.; Zhur. Fiz. Khim. **42**, 1508 (1968)

68PAU/LAV Paukov, I. E.; Lavrent'eva, M. N.; Zhur. Fiz. Khim.; **42**, 1842 (1968)

68SMI/VAS Smirnova, E. K.; Vasil'kova, I. V.; Krasnogira, K. N.; Zhur. Neorg. Khim.; **13**, 1514 (1968)

68SOR/TRO Sorokin, O. S.; Tronia, E. M.; Smirnova, E. K.; Vasil'kova, I. V.; Zhur. Neorg. Khim.; **13**, 3199 (1968)

68STE/PLY Stepin, B. D.; Plyushcheva, V. E.; Selivanova, N. M.; Serebrennikova, G. M.; Zhur. Fiz. Khim.; **42**, 2330 (1968)

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68TOP Topol, L. E.; Inorg. Chem.; **7**, 451 (1968)

68THA/CHI Thakker, M. T.; Chi, C. W.; Peck, R. E.; Wasan, D. T.; J. Chem. Eng. Data; **13**, 553 (1968)

68TOP/OWE Topol, L. E.; Owens, B. B.; J. Phys. Chem.; **72**, 2106 (1968)

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69CHE/PRO Chekhunova, N. P.; Protsenko, P. I.; Venerovskaya, L. N.; Zhur. Fiz. Khim.; **43**, 2070 (1969)

69GUE Guenther, W. B.; J. Am. Chem. Soc.; **91**, 7619 (1969)

69GER/VOR Gerassimov, J. I.; Voronin, G. F.; Nguen Thak Shiu; J. Chem. Thermodynam.; **1**, 425 (1969)

69HAS/SWI Hastie, J. W.; Swingler, D. L.; High Temp. Sci.; **1**, 46 (1969)

69JOH/WIE Johnston, W. V.; Wiedersich, M.; Lindberg, G. W.; J. Chem. Phys.; **51**, 3739 (1969)

69KHA/SAM Khachaturyan, T. A.; Samplavskaya, K. K.; Karapet'yants, M. Kh.; Zhur. Neorg. Khim.; **14**, 1695 (1969)

69KLU/SEL Klushina, T. V.; Selivanova, N. M.; Lapin, V. V.; Fedyainov, N. V.; Zhur. Fiz. Khim.; **43**, 1398 (1969)

69PAU/KHR Paukov, I. E.; Khriplovich, L. M.; Zhur. Fiz. Khim.; **43**, 2678 (1969)

69SCH/GOD Schmidt, F. C.; Godomsky, S.; Ault, F. K.; Huffman, J. C.; J. Chem. Eng. Data; **14**, 71 (1969)

69SES/NIM Seshadri, K. S.; Nimon, L. A.; White, D.; J. Mol. Spectroscopy; **30**, 128 (1969)

69STE/ALL Stepin, B. D.; Allakhvendov, G. P.; Serebrennikova, G. M.; Zhur. Fiz. Khim.; **43**, 2452 (1969)

69TSV/RAB Tsvetkov, V. G.; Rabinovich, I. B.; Zhur. Fiz. Khim.; **43**, 1213 (1969)

69VAS/EFI Vasil'kova, I. V.; Efimov, A. I.; Shapkin, P. S.; Veshnyakov, A. A.; Zhur. Neorg. Khim.; **14**, 429 (1969)

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70EFI/KUD Efimov, A. I.; Kudryashova, Z. P.; Zhur. Neorg. Khim.; **15**, 2 55 (1970)

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70SHP/YAK Metallov'isdatel. Standartov, Moskva; (1970)

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71CHL/LIS Chlebek, R. W.; Lister, M. W.; Can. J. Chem.; **49**, 2943 (1971)

71CUB Cubicciotti, D.; High Temp. Sci.; **3**, 349 (1971)

71GOR/GUS Gorokhov, L. N.; Gusarov, A. V.; Makarov, A. V.; Nikitin, O. T.; Teplofiz. Vysokikh Temp.; **9**, 1173 (1971)

71KAR/DOG Karpenko, N. V.; Dogadina, G. V.; Zhur. Neorg. Khim.; **16**, 818 (1971)

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71PRY/SEL Prymova, L. A.; Selivanova, N. M.; Zhur. Fiz. Khim.; **45**, 2393 (1971)

71RAF/MY Raffelini, F.; My le Van; Compt. rend. C; **273**, 92 (1971)

71SKL/MIK Sklyadnev, Yu. N.; Mikhailov, M. A.; J. Less Common Metals; **25**, 336 (1971)

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72EMO/BRA Emons, H. H.; Brautigam, G.; Kogler, D.; Z. Chem.; **12**, 223 (1972)

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72HAM/WU Hamer, W. J.; Wu, Y. C.; J. Phys. Chem. Ref. Data; **1**, 1047 (1972)

72KUT Kutek, F.; Sb. Vys. Sk. Chem.-technol. Praze. Anorg. Chem. Technol.; B14, 77 (1972) : CA 79-35721

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72TOP Topor, L.; J. Chem. Thermodynam.; **4**, 739 (1972)

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73ABR Abraham, M. H.; J. Chem. Soc. Faraday Trans. I; **69**, 1375 (1973)

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73RUD/YAG2 Rud'ko, P. K.; Yaglov, V. N.; Novikov, G. I.; Sixth All Union Conf. Calorimetry, Tbilisi; (1973) 77

73VDO/SUG Vdovenko, V. M.; Suglobova, I. G.; Chirkst, D. E.; Radiokhimiya; **15**, 58 (1973)

74BUR/HAI Burgess, J.; Haigh, I.; Peacock, R. D.; Taylor, P.; J. Chem. Soc. Dalton Trans.; (1974) 1064

74LON/MUS Longhi, P.; Mussini, T.; Osimani, C.; J. Chem. Thermodyn.; **6**, 227 (1974)

74MAK/NIK Makarov, A. V.; Nikitin, O. T.; Vestn. Mosk. Univ. Khim.; **29**, 533 (1974)

74MOR Morozov, A. I.; Zhur. Neorg. Khim.; **19**, 1514 (1974)

74MUK/SEL Mukhametshina, Z. B.; Seleznev, V. P.; Suponitskii, Yu. L.; Bodrov, V. G.; Karapet'yants, M. Kh.; Sudarikov, B. N.; Zhur. Fiz. Khim.; **48**, 495 (1974)

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76BOU/BLA Bousquet, J.; Blanchard, J.; Claudy, P.; Letoffe, J.; Mathurin, D.; Thermochim. Acta; **15**, 315 (1976)

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77MAK/WES Makhija, F.; Westland, A. D.; J. Chem. Soc. Dalton Trans.; (1977) 1707

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