## Structural revision of products resulting from the reaction of methylhydrazine with acridin-9-yl isothiocyanate due to unexpected acridinyl migration and further reactions

Karel D. Klika<sup>\*a</sup>, Eva Balentová<sup>a,b</sup>, Juraj Bernát<sup>b</sup>, Ján Imrich<sup>b</sup>, Martina Vavrušová<sup>b</sup>, Kalevi Pihlaja<sup>a</sup>, Andreas Koch<sup>c</sup>, Erich Kleinpeter<sup>c</sup>, Alexandra Kelling,<sup>c</sup> and Uwe Schilde<sup>c</sup>

 <sup>a</sup> Department of Chemistry, University of Turku, Vatselankatu 2, FIN-20014 Turku, Finland.
 <sup>b</sup> Department of Organic Chemistry, P. J. Šafárik University, Moyzesova 11, SK-04167 Košice, The Slovak Republic. <sup>c</sup> Department of Chemistry, University of Potsdam, Am Neuen Palais 10, D-14415 Potsdam, Germany E-mail: <u>klikakd@yahoo.co.uk</u>

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>
>Authors:
K.D.Klika, E.Balentova, J.Bernat, J.Imrich, M.Vavrusova, K.Pihlaja,
>A.Koch, E.Kleinpeter, A.Kelling, U.Schilde
>
>Journal: ARKIVOC (1037)
>Compound: 2-(2-(9,10-dihydroacridin-9-yliden)-1-methylhydrazino)-4,5-
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>Formula: C17 H14 N4 O1 S1
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K.D.Klika, E.Balentova, J.Bernat, J.Imrich, M.Vavrusova, K.Pihlaja,
>A.Koch, E.Kleinpeter, A.Kelling, U.Schilde
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     University of Potsdam
     Department of Chemistry
    Karl-Liebknecht.Str. 24-25
    D-14467 Potsdam
    Germany
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     University of Turku
;
     Department of Chemistry
     Vatselankatu 2
     FIN-20014 Turku
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;
     'Balentova, Eva'
    P.J. Safarik University
;
     Department of Organic Chemistry
      Moyzesova 11, SK-04167 Kosice
      The Slovak Republic
;
     'Bernat, Juraj'
     P.J. Safarik University
;
      Department of Organic Chemistry
      Moyzesova 11, SK-04167 Kosice
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;
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;
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```

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;
     'Vavrusova, Martina'
     P.J. Safarik University
;
     Department of Organic Chemistry
     Moyzesova 11, SK-04167 Kosice
     The Slovak Republic
;
     'Pihlaja, Kalevi'
     University of Turku
;
     Department of Chemistry
     Vatselankatu 2
     FIN-20014 Turku
     Finland
;
     'Koch, Andreas'
     University of Potsdam
     Department of Chemistry
     Karl-Liebknecht.Str. 24-25
     D-14467 Potsdam
     Germany
;
     'Kleinpeter, Erich'
     University of Potsdam
     Department of Chemistry
     Karl-Liebknecht.Str. 24-25
     D-14467 Potsdam
     Germany
;
     'Kelling, Alexandra'
     University of Potsdam
     Department of Chemistry
     Karl-Liebknecht.Str. 24-25
     D-14467 Potsdam
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refine ls extinction coef 2 refine ls number refins 2557 \_refine\_ls\_number\_parameters 250 refine ls number restraints 0 refine ls R factor all 0.1177 refine ls R factor qt 0.0451 refine ls wR factor ref 0.0587 refine ls wR factor gt 0.0485 \_refine\_ls\_goodness of fit ref 0.804 \_refine\_ls\_restrained\_S\_all 0.804 \_refine\_ls\_shift/su\_max\_ 0.000 refine ls shift/su mean 0.000 publ section exptl refinement All hydrogen atoms were found from the difference Fourier map. ; loop atom site label atom site type symbol \_atom\_site\_fract x \_atom\_site\_fract\_y \_atom\_site\_fract\_z \_atom\_site\_U\_iso or equiv \_atom\_site\_adp type atom site occupancy atom site symmetry multiplicity atom site calc flag \_atom\_site\_refinement flags \_atom\_site\_disorder assembly atom site disorder group C1 C 1.6527(6) 0.7378(2) -0.40081(15) 0.0264(8) Uani 1 1 d . . . C2 C 1.4276(7) 0.7208(2) -0.35428(17) 0.0309(9) Uani 1 1 d . . . H2 H 1.362(6) 0.7584(19) -0.3208(15) 0.037 Uiso 1 1 d . . . C3 C 1.3033(7) 0.6515(2) -0.35867(18) 0.0356(9) Uani 1 1 d . . . H3 H 1.132(7) 0.642(2) -0.3315(15) 0.043 Uiso 1 1 d . . . C4 C 1.3887(8) 0.5928(2) -0.41058(18) 0.0405(10) Uani 1 1 d . . . H4 H 1.292(7) 0.547(2) -0.4138(16) 0.049 Uiso 1 1 d . . . C5 C 1.5969(7) 0.6085(2) -0.45904(18) 0.0350(9) Uani 1 1 d . . . H5 H 1.654(7) 0.568(2) -0.4891(16) 0.042 Uiso 1 1 d . . . C6 C 1.7246(6) 0.6802(2) -0.45622(15) 0.0272(8) Uani 1 1 d . . . C7 C 2.0394(6) 0.7653(2) -0.51475(15) 0.0269(8) Uani 1 1 d . . . C8 C 2.2293(7) 0.7778(2) -0.57308(16) 0.0344(10) Uani 1 1 d . . . H8 H 2.276(6) 0.734(2) -0.6090(16) 0.041 Uiso 1 1 d . . . C9 C 2.3406(8) 0.8500(2) -0.58182(17) 0.0433(11) Uani 1 1 d . . . H9 H 2.501(7) 0.860(2) -0.6243(16) 0.052 Uiso 1 1 d . . . C10 C 2.2688(8) 0.9126(2) -0.53302(19) 0.0441(11) Uani 1 1 d . . . H10 H 2.349(7) 0.967(2) -0.5413(16) 0.053 Uiso 1 1 d . . C11 C 2.0906(7) 0.8992(2) -0.47344(17) 0.0349(9) Uani 1 1 d . . . H11 H 2.063(6) 0.943(2) -0.4403(16) 0.042 Uiso 1 1 d . . . C12 C 1.9776(7) 0.82648(19) -0.46236(16) 0.0256(8) Uani 1 1 d . . . C13 C 1.8027(6) 0.8091(2) -0.39584(15) 0.0261(8) Uani 1 1 d . . . C14 C 1.7841(8) 0.7818(2) -0.21849(19) 0.0343(9) Uani 1 1 d . . . H14A H 1.977(7) 0.7779(19) -0.2211(16) 0.041 Uiso 1 1 d . . . H14B H 1.735(6) 0.787(2) -0.1671(17) 0.041 Uiso 1 1 d . . . H14C H 1.773(7) 0.732(2) -0.2380(16) 0.041 Uiso 1 1 d . . .

**General Papers** 

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All esds (except the esd in the dihedral angle between two l.s.
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angles
and torsion angles; correlations between esds in cell parameters are
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used when they are defined by crystal symmetry. An approximate
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C8 C7 C12 119.2(3) . . ? C9 C8 C7 120.1(3) . . ? C8 C9 C10 121.1(3) . . ? C11 C10 C9 118.6(4) . . ? C10 C11 C12 121.6(3) . . ? C11 C12 C7 119.2(3) . . ? C11 C12 C13 122.7(3) . . ? C7 C12 C13 118.1(3) . . ? N2 C13 C1 130.6(2) . . ? N2 C13 C12 112.6(3) . . ? C1 C13 C12 116.7(3) . . ? N3 C15 N4 122.0(3) . . ? N3 C15 S 119.4(2) . . ? N4 C15 S 118.6(2) . . ? C17 C16 S 105.8(2) . . ? O C17 N4 124.0(3) . . ? O C17 C16 120.4(3) . . ? N4 C17 C16 115.5(2) . . ? C7 N1 C6 122.7(3) . . ? C13 N2 N3 114.9(3) . . ? C15 N3 N2 117.1(3) . . ? C15 N3 C14 122.3(2) . . ? N2 N3 C14 118.3(3) . . ? C15 N4 C17 111.0(3) . . ? C15 S C16 88.97(15) . . ? loop geom torsion atom site label 1 geom torsion atom site label 2 \_geom\_torsion\_atom site label 3 \_geom\_torsion\_atom\_site\_label\_4 \_geom torsion geom torsion site symmetry 1 geom torsion site symmetry 2 geom torsion site symmetry 3 \_geom\_torsion\_site\_symmetry 4 geom torsion publ flag C6 C1 C2 C3 4.9(5) . . . ? C13 C1 C2 C3 -176.5(3) . . . ? C1 C2 C3 C4 -0.9(6) . . . ? C2 C3 C4 C5 - 2.3(6) . . . ?C3 C4 C5 C6 1.1(6) . . . ? C4 C5 C6 N1 -177.4(4) . . . ? C4 C5 C6 C1 3.1(5) . . . ? C2 C1 C6 N1 174.6(3) . . . ? C13 C1 C6 N1 -4.1(5) . . . ? C2 C1 C6 C5 -6.0(5) . . . ? C13 C1 C6 C5 175.4(3) . . . ? N1 C7 C8 C9 178.1(4) . . . ? C12 C7 C8 C9 -4.0(5) . . . ? C7 C8 C9 C10 0.2(6) . . . ? C8 C9 C10 C11 2.7(6) . . . ? C9 C10 C11 C12 -1.7(6) . . . ? C10 C11 C12 C7 -2.1(6) . . . ? C10 C11 C12 C13 175.3(4) . . . ? N1 C7 C12 C11 -177.2(3) . . . ? C8 C7 C12 C11 5.0(5) . . . ?

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     University of Turku
;
      Department of Chemistry
     Vatselankatu 2
     FIN-20014 Turku
     Finland
;
     'Balentova, Eva'
     P.J. Safarik University
;
     Department of Organic Chemistry
     Moyzesova 11, SK-04167 Kosice
     The Slovak Republic
;
     'Bernat, Juraj'
     P.J. Safarik University
;
     Department of Organic Chemistry
     Moyzesova 11, SK-04167 Kosice
     The Slovak Republic
;
     'Imrich, Jan'
     P.J. Safarik University
;
     Department of Organic Chemistry
     Moyzesova 11, SK-04167 Kosice
     The Slovak Republic
;
     'Vavrusova, Martina'
     P.J. Safarik University
;
      Department of Organic Chemistry
     Moyzesova 11, SK-04167 Kosice
     The Slovak Republic
;
     'Pihlaja, Kalevi'
     University of Turku
;
      Department of Chemistry
     Vatselankatu 2
     FIN-20014 Turku
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```

```
University of Potsdam
      Department of Chemistry
     Karl-Liebknecht.Str. 24-25
     D-14467 Potsdam
     Germany
;
     'Kleinpeter, Erich'
     University of Potsdam
     Department of Chemistry
     Karl-Liebknecht.Str. 24-25
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     Germany
;
     'Kelling, Alexandra'
     University of Potsdam
     Department of Chemistry
     Karl-Liebknecht.Str. 24-25
     D-14467 Potsdam
     Germany
;
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     University of Potsdam
      Department of Chemistry
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0.000 refine ls shift/su mean \_publ\_section\_exptl\_refinement All hydrogen atoms were found from the difference Fourier map. ; loop atom site label \_atom\_site\_type\_symbol \_atom\_site fract x atom site fract y atom site fract z \_atom\_site\_U\_iso\_or\_equiv \_atom\_site\_adp type \_atom\_site occupancy \_atom\_site\_symmetry\_multiplicity \_atom\_site\_calc flag atom site refinement flags atom site disorder assembly atom site disorder group CI C 0.45976(17) -0.13888(10) 0.01815(18) 0.0283(5) Uani 1 1 d . . . C2 C 0.4920(2) -0.08745(12) -0.0401(2) 0.0354(5) Uani 1 1 d . . . H2 H 0.458(2) -0.0527(12) -0.042(2) 0.041(7) Uiso 1 1 d . . . C3 C 0.5766(2) -0.09258(13) -0.0855(2) 0.0450(6) Uani 1 1 d . . . H3 H 0.599(2) -0.0565(12) -0.123(2) 0.048(7) Uiso 1 1 d . . . C4 C 0.6347(2) -0.14838(13) -0.0733(2) 0.0467(7) Uani 1 1 d . . . H4 H 0.703(3) -0.1537(14) -0.093(3) 0.071(9) Uiso 1 1 d . . . C5 C 0.6058(2) -0.19932(12) -0.0189(2) 0.0406(6) Uani 1 1 d . . . H5 H 0.644(2) -0.2374(12) -0.010(2) 0.042(7) Uiso 1 1 d . . . C6 C 0.51638(17) -0.19550(10) 0.02565(18) 0.0295(5) Uani 1 1 d . . . C7 C 0.39828(17) -0.24740(10) 0.11842(18) 0.0287(5) Uani 1 1 d . . . C8 C 0.3659(2) -0.30473(12) 0.1560(2) 0.0370(6) Uani 1 1 d . . . H8 H 0.4035(18) -0.3399(11) 0.1539(19) 0.031(6) Uiso 1 1 d . . . C9 C 0.2763(2) -0.30753(12) 0.1951(2) 0.0413(6) Uani 1 1 d . . . H9 H 0.2574(19) -0.3481(12) 0.218(2) 0.042(7) Uiso 1 1 d . . . C10 C 0.2179(2) -0.25264(12) 0.1966(2) 0.0405(6) Uani 1 1 d . . . H10 H 0.157(2) -0.2539(12) 0.216(2) 0.051(8) Uiso 1 1 d . . . C11 C 0.24861(18) -0.19610(12) 0.1614(2) 0.0362(6) Uani 1 1 d . . . H11 H 0.207(2) -0.1595(12) 0.160(2) 0.041(7) Uiso 1 1 d . . . C12 C 0.34086(16) -0.19053(10) 0.12197(17) 0.0277(5) Uani 1 1 d . . . C13 C 0.37543(16) -0.13241(10) 0.07680(18) 0.0268(5) Uani 1 1 d . . . C14 C 0.3288(3) -0.05753(15) 0.2769(2) 0.0448(7) Uani 1 1 d . . . H14A H 0.355(3) -0.098(2) 0.308(4) 0.113(14) Uiso 1 1 d . . . H14B H 0.288(3) -0.0469(14) 0.321(3) 0.065(9) Uiso 1 1 d . . . H14C H 0.393(4) -0.0357(19) 0.293(4) 0.106(14) Uiso 1 1 d . . . C15 C 0.18708(18) -0.02588(10) 0.09964(19) 0.0322(5) Uani 1 1 d . . . C16 C 0.5666(4) -0.36547(18) -0.0962(3) 0.0710(9) Uani 1 1 d . . . H16A H 0.542(4) -0.324(2) -0.147(4) 0.133(16) Uiso 1 1 d . . . H16B H 0.639(4) -0.375(2) -0.111(4) 0.123(15) Uiso 1 1 d . . . H16C H 0.507(5) -0.400(3) -0.138(6) 0.19(2) Uiso 1 1 d . . . N1 N 0.48591(16) -0.24714(10) 0.07763(17) 0.0331(5) Uani 1 1 d . . . H1 H 0.515(2) -0.2780(12) 0.077(2) 0.035(7) Uiso 1 1 d . . . N2 N 0.34347(15) -0.07377(9) 0.07977(16) 0.0342(5) Uani 1 1 d . . . N3 N 0.27496(14) -0.05944(8) 0.15047(16) 0.0315(4) Uani 1 1 d . . . N4 N 0.1574(2) -0.02346(11) -0.01729(18) 0.0444(6) Uani 1 1 d . . . H41 H 0.195(2) -0.0408(12) -0.051(2) 0.041(7) Uiso 1 1 d . . .

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