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3 **Comments on “Solubility parameter of chitin and chitosan”**

4 **Carbohydrate Polymers 36 (1998) 121-127**

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15
16 **Abstract**

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18 Results on the solubility parameters of chitin and chitosan presented in the paper DOI:
19 10.1016/S0144-8617(98)00020-4 were recalculated and data evaluation was redone. A
20 number of misprints, erroneous calculations and data evaluations were found with respect to
21 Hansen as well as total solubility parameters as derived according to group contribution
22 methods by Hoftyzer-Van Krevelen and Hoy's system. Revised numerical data are
23 presented.

24
25 **Keywords**

26 Chitin; chitosan; solubility parameter; group contribution methods

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28
29 Dear Professors Kennedy and Coimbra,

30 Dear Colleagues,

31
32 we have read with interest the above publication by A. A. Khan (corresponding author) et al.
33 who presented results of extensive solubility parameter calculations on chitin and chitosan.
34 To our understanding part of the calculations and results deduced therefrom appear
35 inconsistent while others are numerically erroneous. Also a number of presumed misprints
36 and an inaccurately evaluated diagram, both relevant to the publication content, seem to be
37 present. Because the paper has attracted quite some interest and serves as a kind of
38 reference for chitin and chitosan we feel it could prove advisable to comment on and possibly
39 correct for any discrepancies that there might be. This holds all the more as, to our
40 knowledge, there has been no subsequent publication covering the same subject in any
41 comparable detail or extent.

42
43 To structure our comments we begin with, what we believe are, literal mistakes, then we turn
44 to a questionable diagram evaluation before a number of calculation errors are traced. We
45 attempt to summarize our pleas by showing how the results presented in Tables 4, 6 and 9
46 and in Sections 3 and 4 of the original paper are affected.

47 The authors treat solubility parameters in the framework of quantitative group contribution
48 methods (GCM) according to Hoy and Van Krevelen. Attention is also paid to the Hansen

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