Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information:

Experimental and Theoretical Evaluation of *trans*-3-Halo-2-Hydroxy-Tetrahydropyran Conformational Preferences. Beyond Anomeric Interaction.

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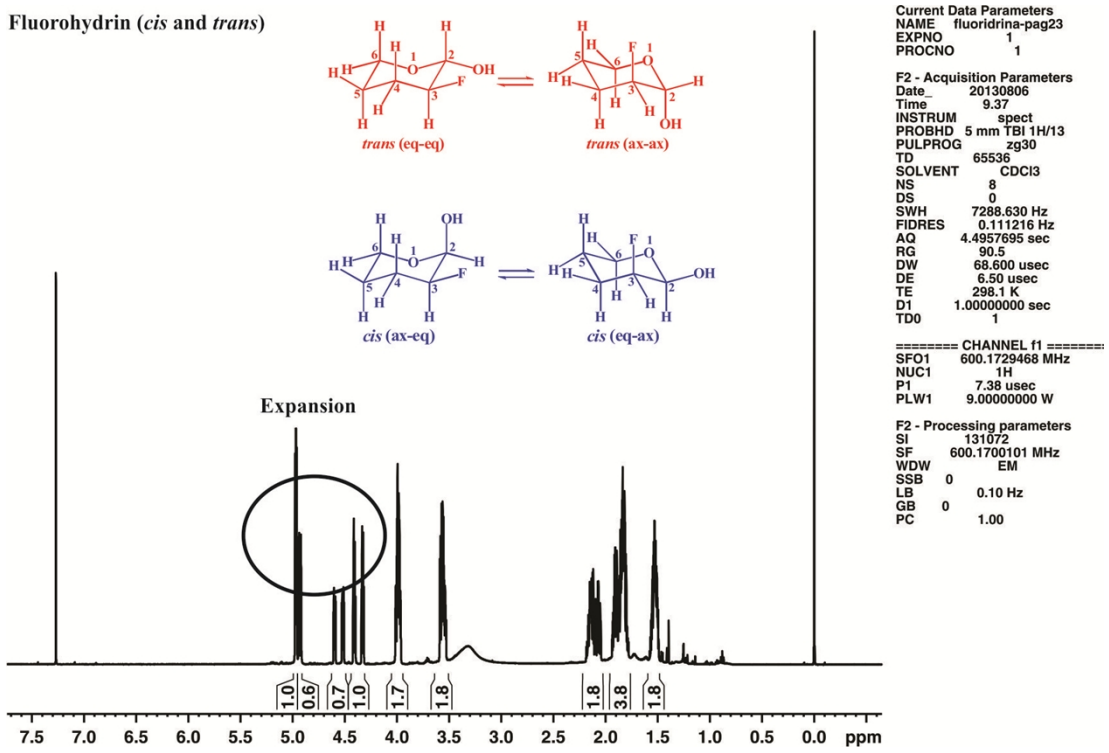

Figure S1: ^{1}H NMR spectrum of the mixture (*cis* and *trans*) fluorohydrin in $CDCl_3$ acquired at 600 MHz.

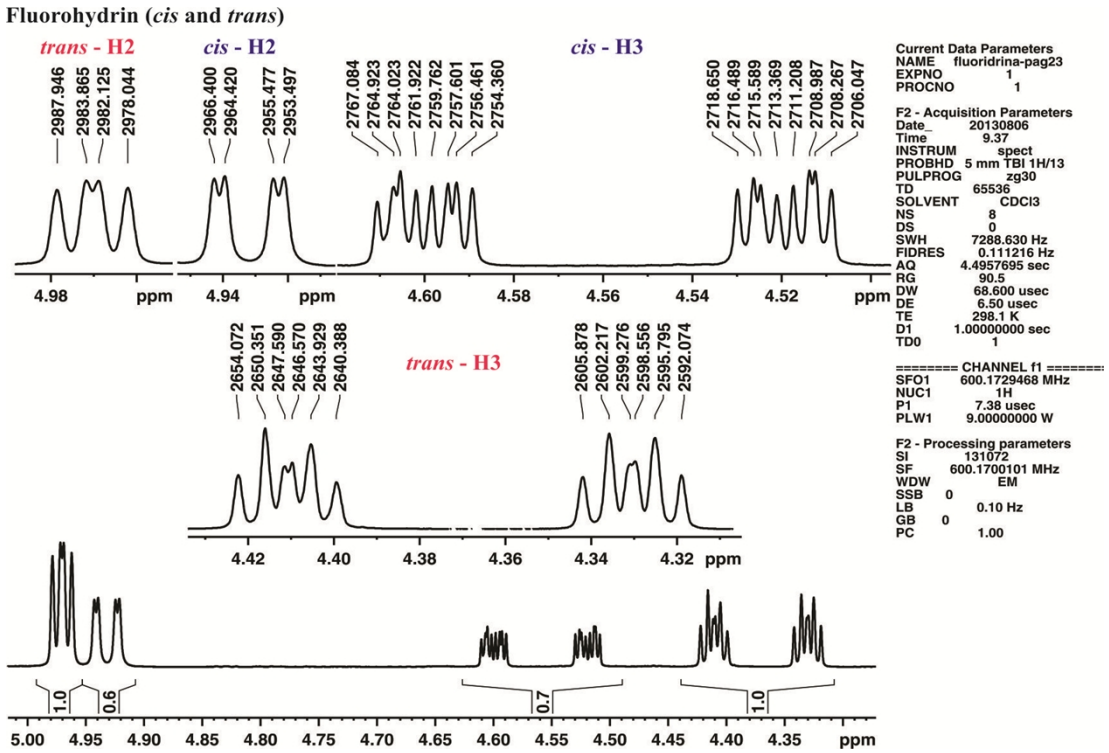

Figure S2: Expansion of ^{1}H NMR spectrum of fluorohydrin. Signals related to Hydrogens H2 and H3 of both diastereoisomers.

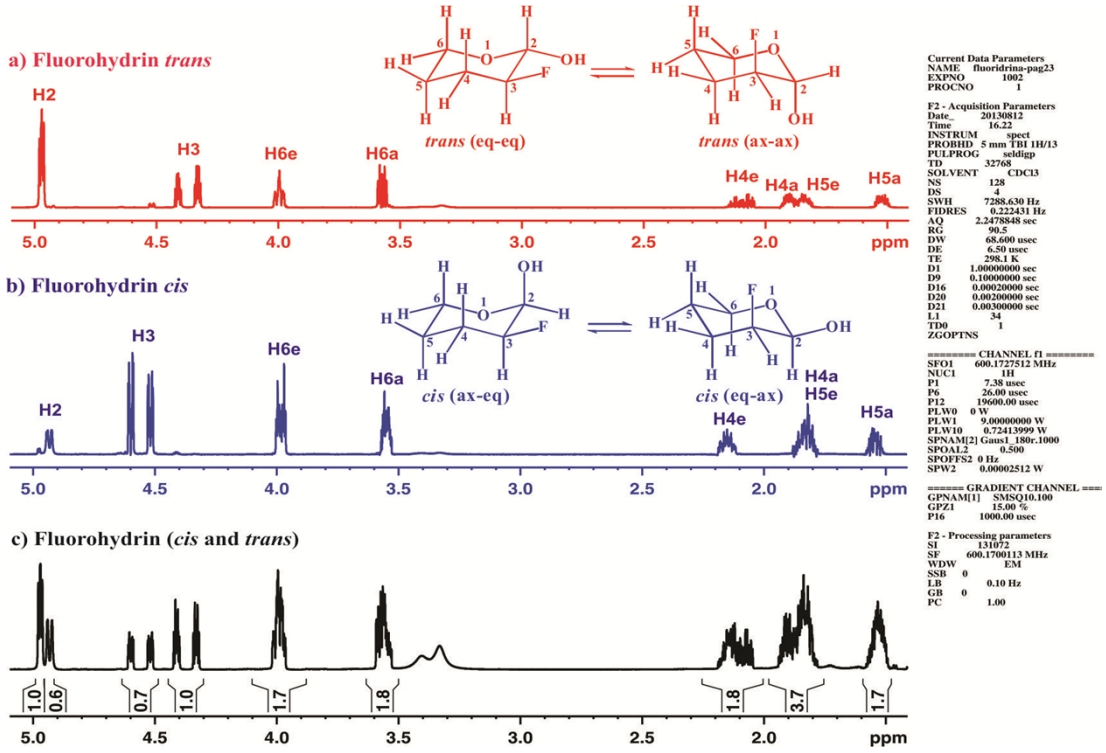

Figure S3: ^{1}H Sub-spectra with the assignment for fluorohydrin: a) *trans* isomer; b) *cis* isomer acquired through selective TOCSY experiment and c) a normal ^{1}H NMR spectrum for the *cis* and *trans* mixture.

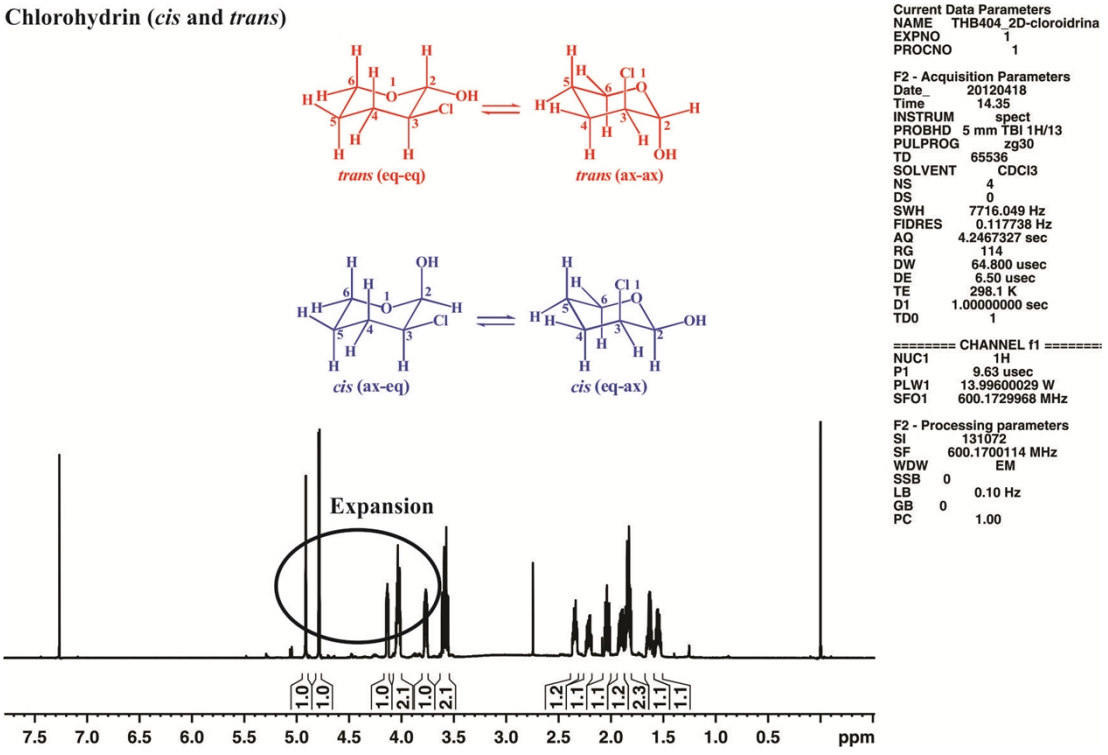

Figure S4: ^{1}H NMR spectrum of the mixture (*cis* and *trans*) chlorohydrin in $CDCl_3$ acquired at 600 MHz.

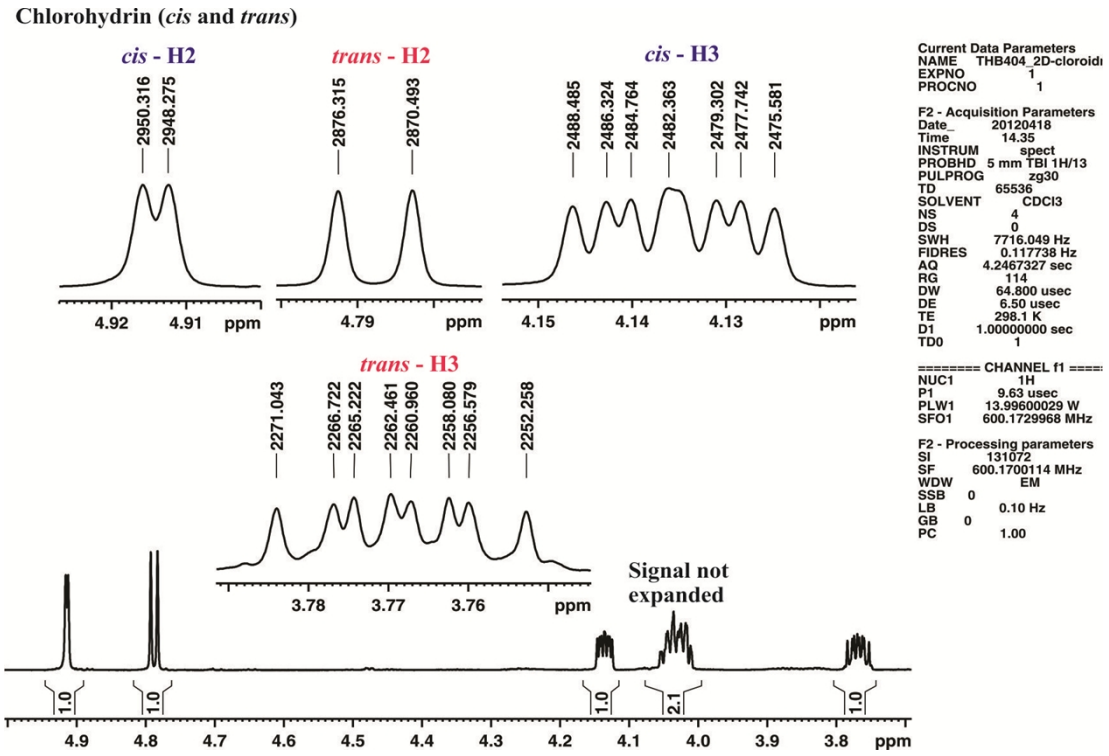

Figure S5: Expansion of ^{1}H NMR spectrum of chlorohydrin. Signals related to Hydrogens H2 and H3 of both diastereoisomers.

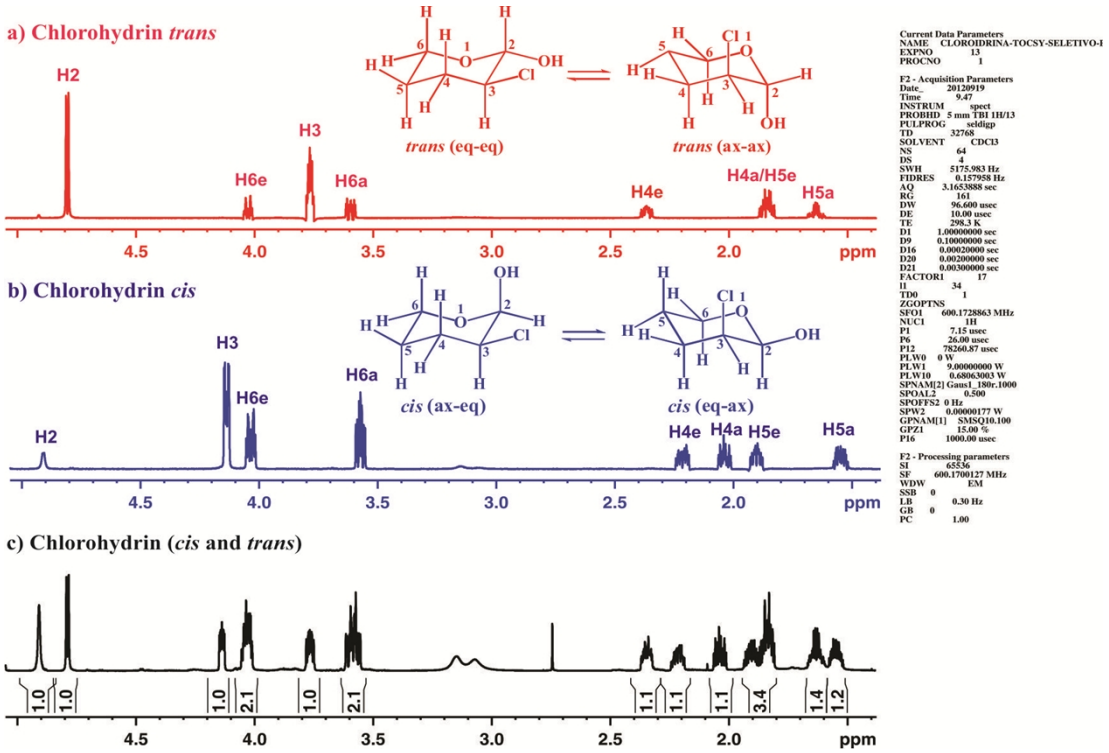

Figure S6: ^{1}H Sub-spectra with the assignment for chlorohydrin: a) *trans* isomer; b) *cis* isomer acquired through selective TOCSY experiment and c) a normal ^{1}H NMR spectrum for the *cis* and *trans* mixture.

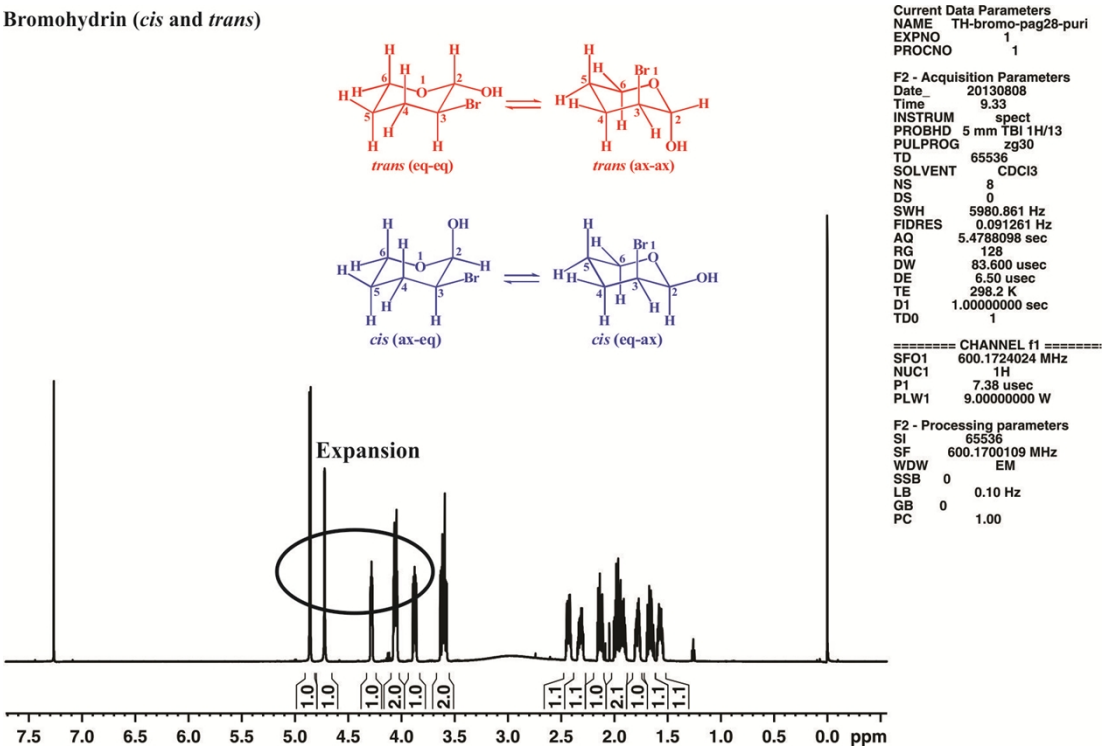

Figure S7: ^{1}H NMR spectrum of the mixture (*cis* and *trans*) bromohydrin in $CDCl_3$ acquired at 600 MHz.

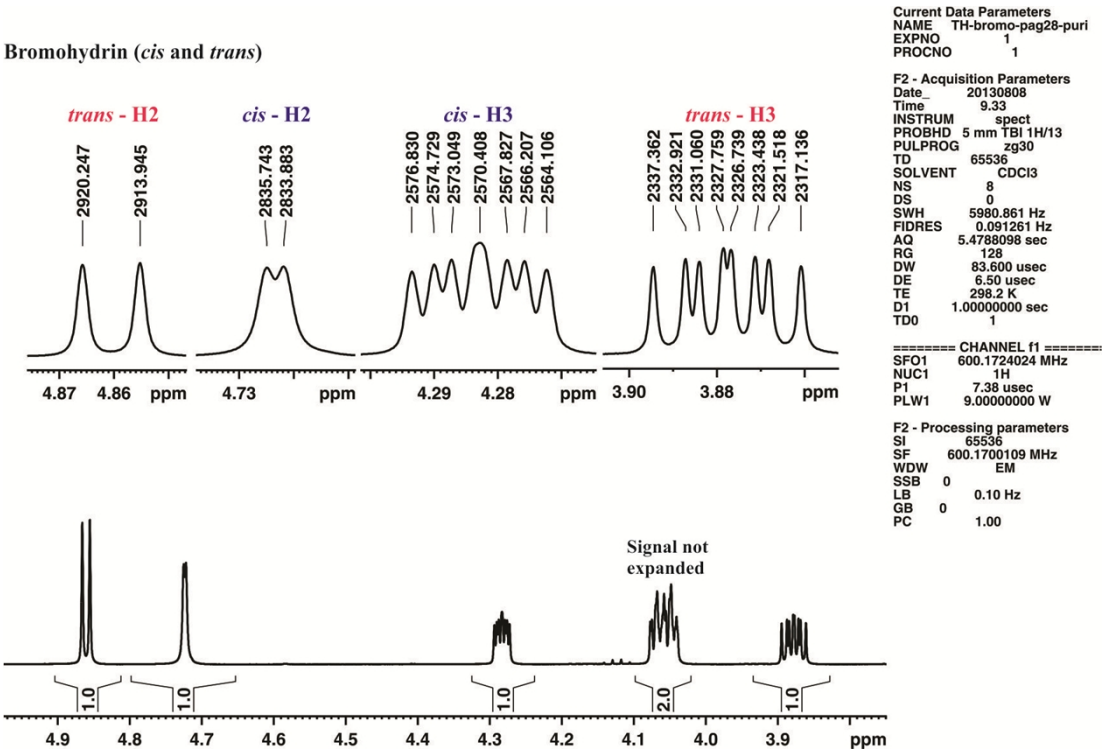

Figure S8: Expansion of ^{1}H NMR spectrum of bromohydrin. Signals related to Hydrogens H2 and H3 of both diastereoisomers.

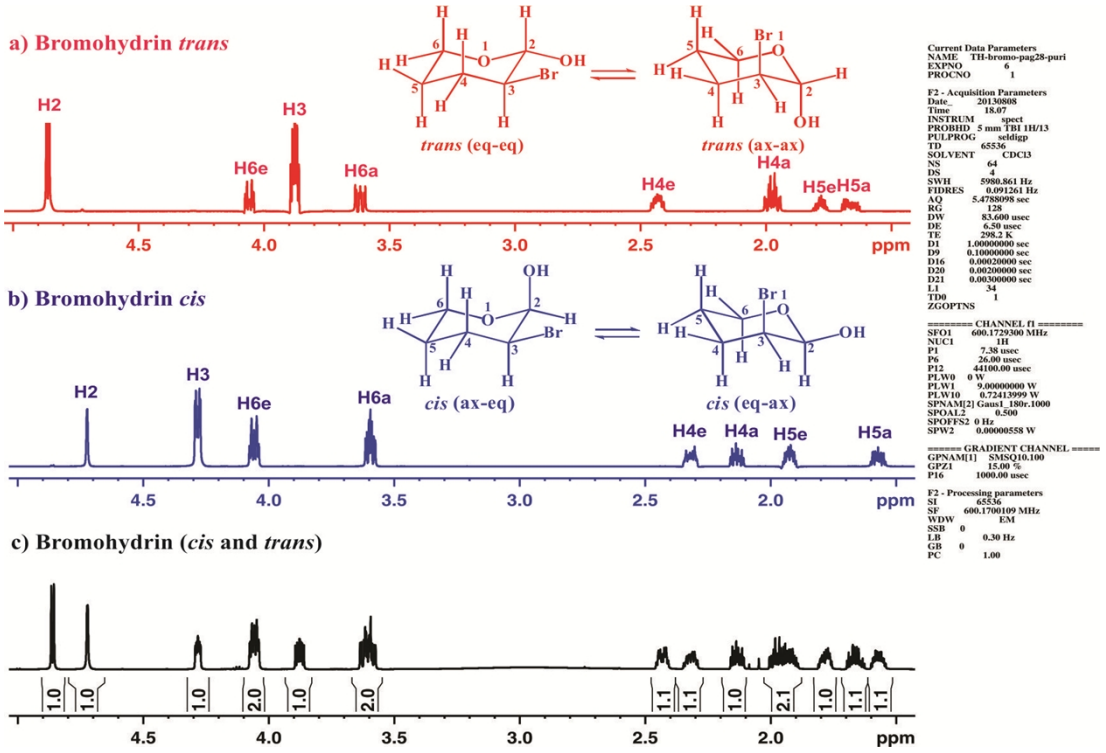

Figure S9: ^{1}H Sub-spectra with the assignment for bromohydrin: a) *trans* isomer; b) *cis* isomer acquired through selective TOCSY experiment and c) a normal ^{1}H NMR spectrum for the *cis* and *trans* mixture.

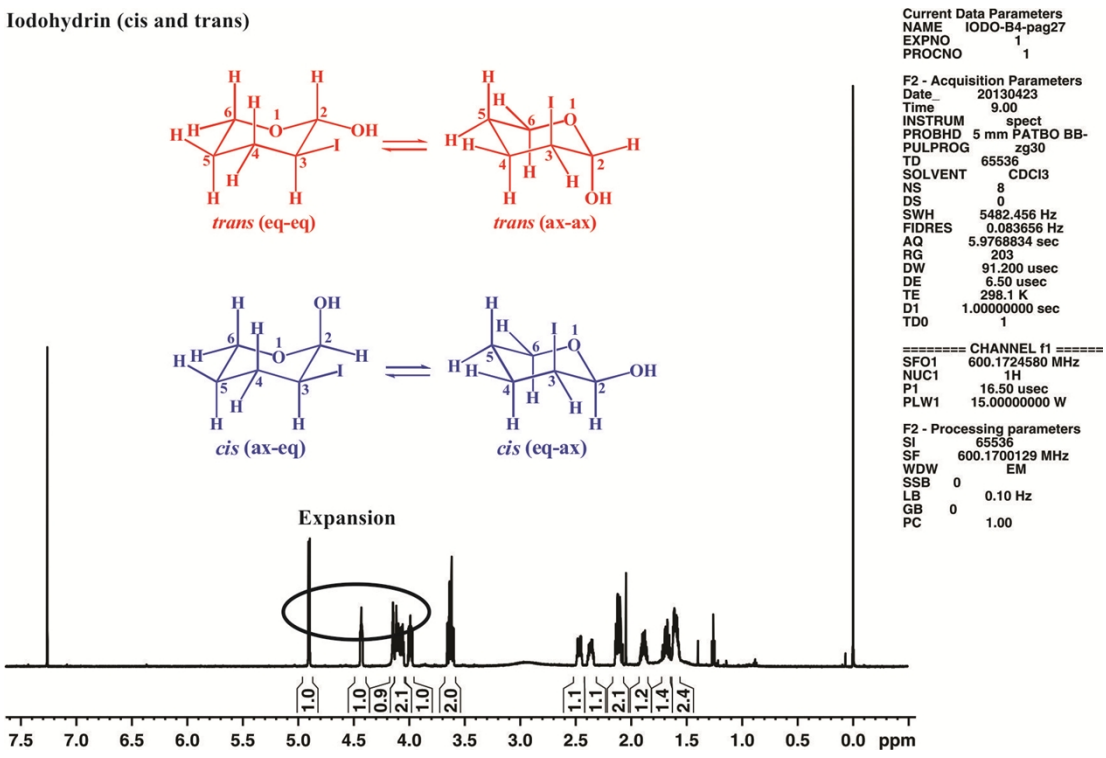

Figure S10: ^{1}H NMR spectrum of the mixture (*cis* and *trans*) iodohydrin in $CDCl_3$ acquired at 600 MHz.

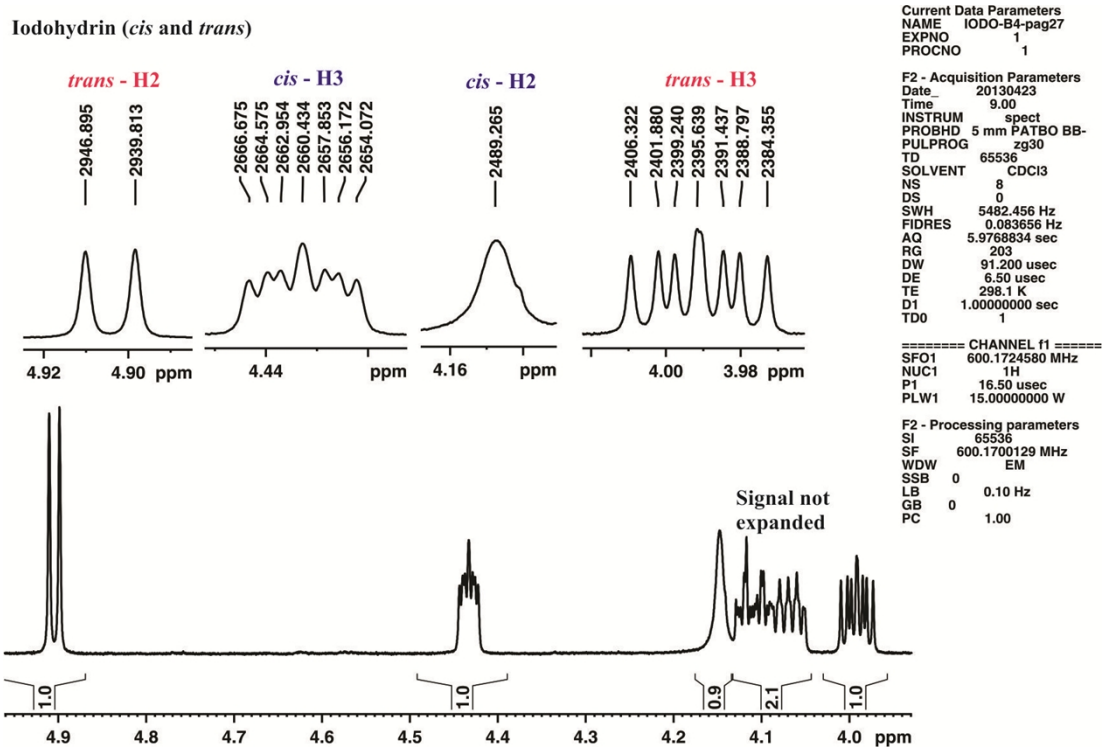

Figure S11: Expansion of ^{1}H NMR spectrum of iodohydrin. Signals related to Hydrogens H2 and H3 of both diastereoisomers.

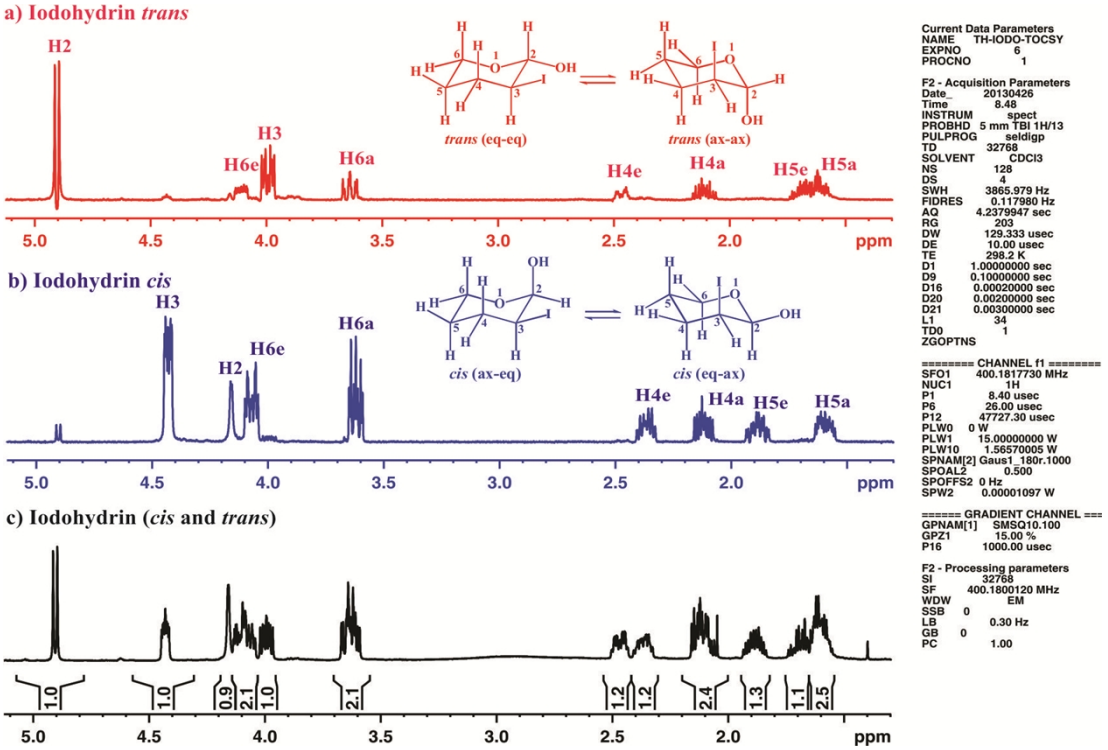

Figure S12: ^{1}H Sub-spectra with the assignment for iodohydrin: a) *trans* isomer; b) *cis* isomer acquired through selective TOCSY experiment and c) a normal ^{1}H NMR spectrum for the *cis* and *trans* mixture.