ELECTRONIC SUPPLEMENTARY INFORMATION

Hydroxy double salts as versatile storage and delivery matrices

Richard M. R. Bull, Charles Markland, Gareth R. Williams, and Dermot O'Hare*

CONTENTS

Table S1: Parameters extracted from the fitting of kinetic models to the release of ibuprofen from Zn_5-ibu.

Model	R^2 (3 s.f.)	k_d / 10^{-3} min^{-1} (3 s.f.)	Other parameters (3 s.f.)
First-order	0.991	9.72	N/A.
Freundlich	1.00	6.64	$a = 1.00$
Avrami-Erofe'ev	0.997	9.27	$n = 1.13$
Elovich	0.937	N/A	$a = 0.302$ $b = -0.774$
Parabolic	0.277	8.00	$a = 0.0501$

Table S2: Parameters extracted from the fitting of kinetic models for release from Zn_5-2,4,5-T; coated Zn_5-ibu; and coated Zn_5-dic.

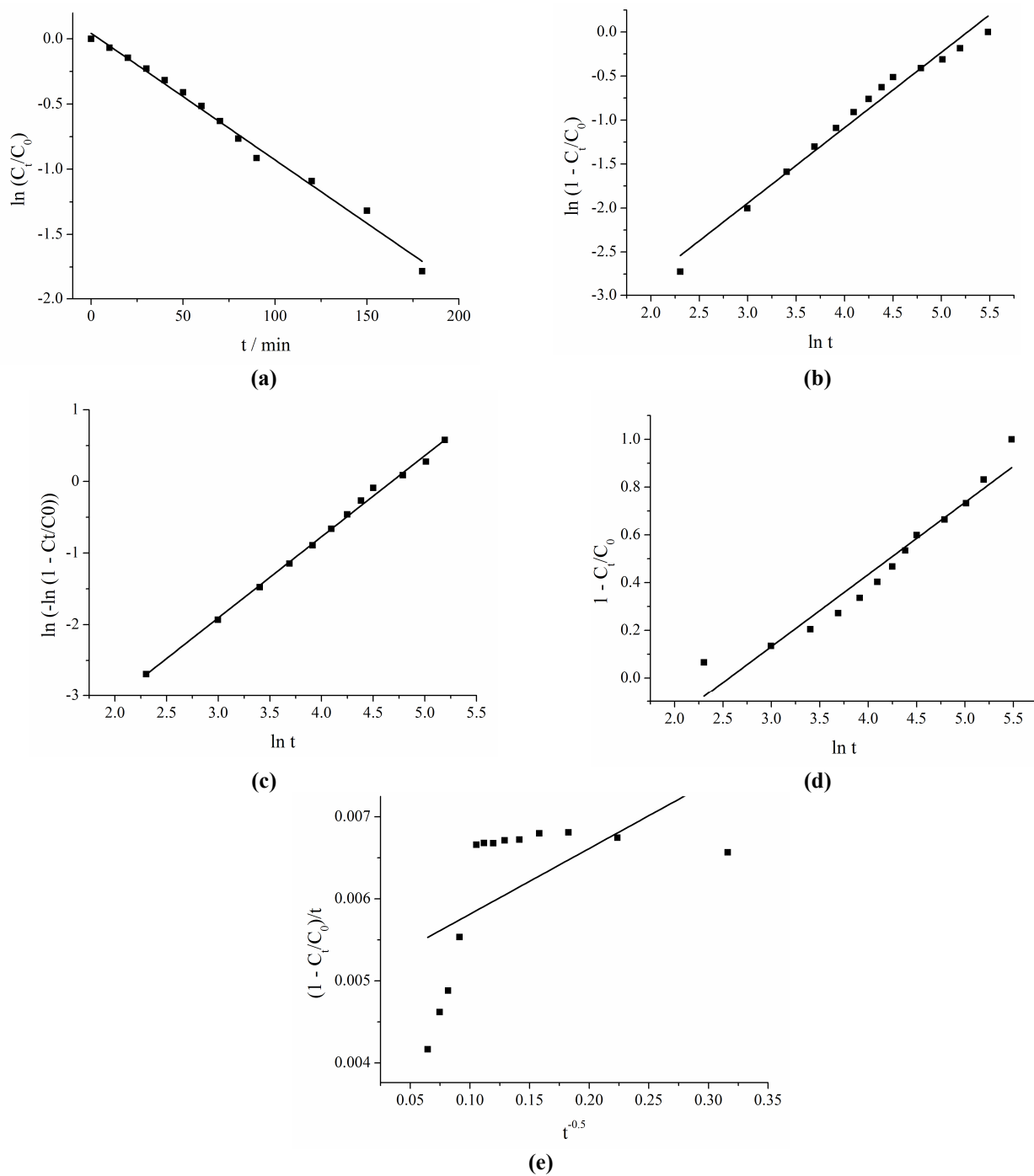| Intercalate	Release stage	Model	R^2 (3 s.f.)	k_d / 10^{-3} min^{-1} (3 s.f.)	Other parameters (3 s.f.)
	Early	Freundlich	0.986	4.39	$a = 1.28$
	Early	Avrami-Erofe'ev	0.998	19.6	$n = 1.52$
Zn_5-2,4,5-T	Late	First-order	0.958	5.81	N/A.
	Late	Elovich	0.969	N/A	$a = 0.0443$ $b = 0.727$
	Early	Freundlich	0.993	0.378	$a = 1.58$
	Early	Avrami-Erofe'ev	0.991	8.50	$n = 1.77$
Zn_5-ibu (coated)	Late	First-order	0.982	3.90	N/A.
	Late	Elovich	0.951	N/A	$a = 0.149$ $b = -0.046$
	Early	Freundlich	0.987	0.140	$a = 1.76$
	Early	Avrami-Erofe'ev	0.986	7.86	$n = 1.95$
Zn_5-dic	Late	First-order	0.982	5.24	N/A.
	Late	Elovich	0.879	N/A	$a = 0.125$ $b = 0.137$

Figure S1: Fits of **(a)** first-order; **(b)** Freundlich; **(c)** Avrami-Erofe'ev; **(d)** Elovich and **(e)** parabolic kinetic models to the release of ibuprofen from Zn_5-ibu.
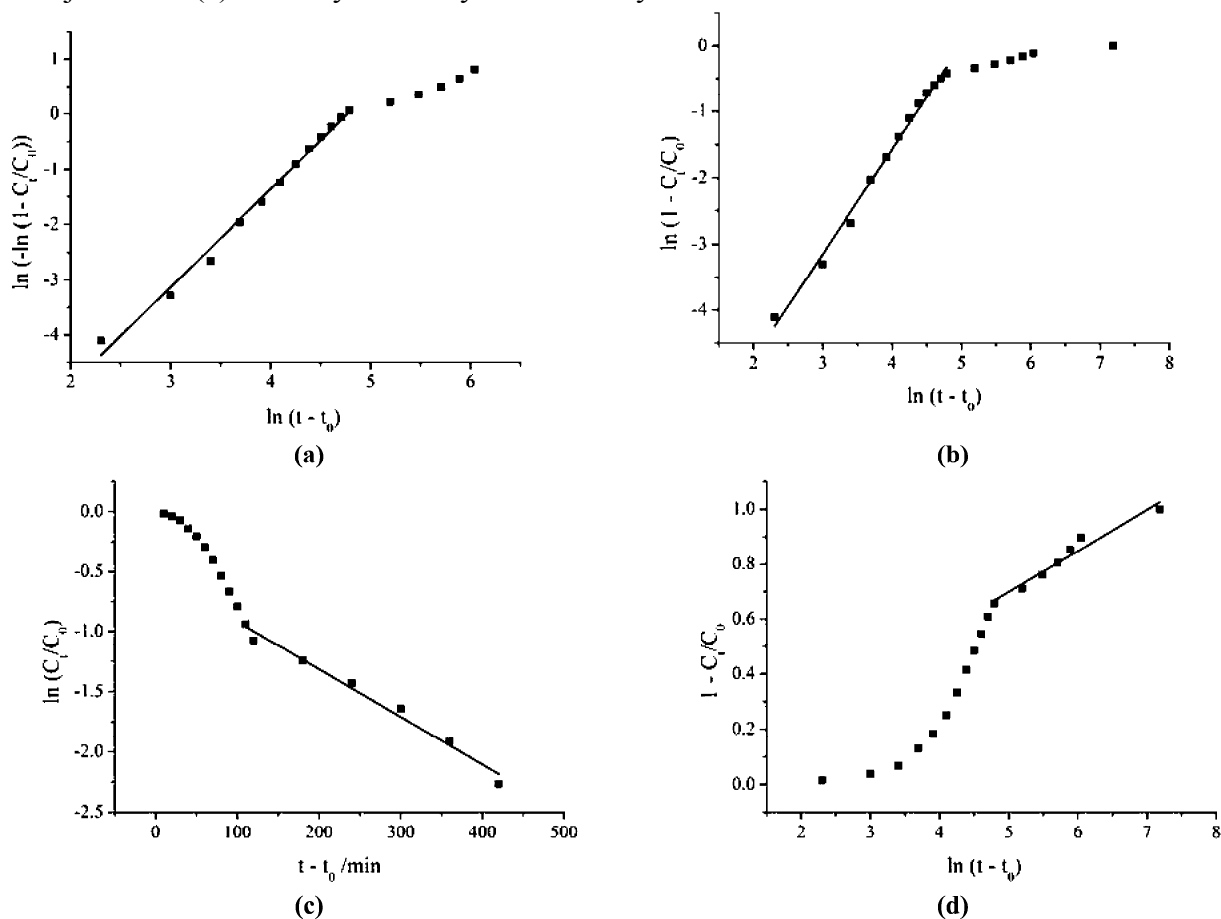
Figure S2: Fits of **(a)** Avrami-Erofe'ev; **(b)** Freundlich; **(c)** first-order; and **(d)** Elovich models to the release of ibuprofen from coated Zn_5-ibu, showing that the first-order and Elovich models provide a good fit to the data in the later stages of reaction, whereas the Avrami-Erofe'ev and Freundlich models better describe the earlier stages.
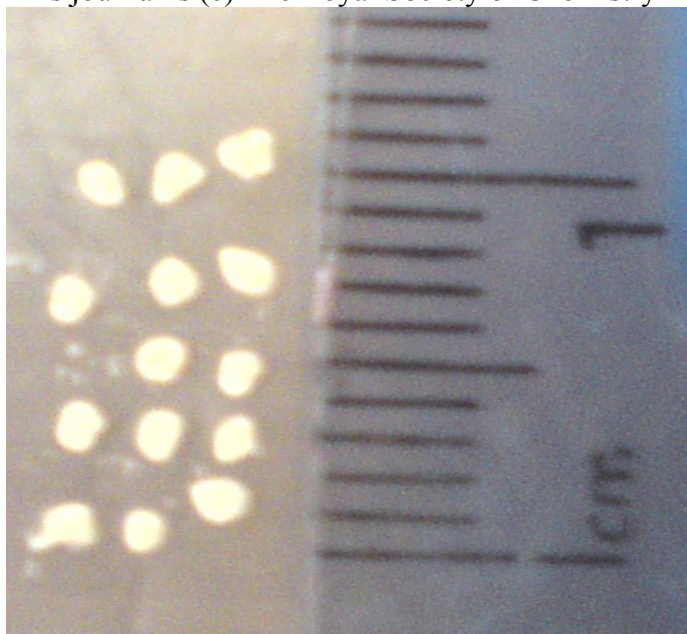
Figure S3: Photograph of the enterically coated Zn$_5$-ibu beads. A ruler is shown to the right hand size to provide an idea of scale.