Electronic Supplementary Material (ESI) for ChemComm.

High-throughput characterisation of supramolecular gelation processes using a combination of optical density, fluorescence and UV-Vis absorption measurements

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Experimental

General remarks: A positive pressure of nitrogen and oven-dried glassware were used for all reactions. All solvents and starting materials were purchased from known chemical suppliers or available stores and used without any further purification unless specifically stipulated. UV-Vis absorbance, optical density and fluorescence measurements were conducted and analysed using a Clariostar plate reader and MARS data analysis software.

Preparation of 96-well microplates: Standards and supramolecular hydrogels/solutions of **1** (n=3) were prepared either in black bottom or low UV-transparent 96-well microplates. Standards or compound **1** in the relevant solutions (1.5 mg/mL) were transferred as 200 µL aliquots to each microplate well, at a temperature higher than the melting point (T_m) of the material. Recorded at 5 mg/mL of **1**, to reduce the proportion of samples to exist as partial gels.

UV-Vis spectroscopy: After preparation, the low UV-transparent 96-well microplate was then transferred into the plate reader at an equilibrated temperature of 45 °C and absorbance measurements taken at 5-degree decreases from 45 °C to 25 °C. All experiments were repeated in triplicate to ensure experimental reproducibility.

Fluorescence spectroscopy: After preparation, the black bottom 96-well microplate was then transferred into the plate reader at an equilibrated temperature of 45 °C. Fluorescence measurements were taken at 5-degree decreases from 45 °C to 25 °C using an excitation value of 435 nm and an optimised gain of 1200. All experiments were repeated in triplicate to ensure experimental reproducibility.

Optical denceity (OD) spectral well scans: After preparation, the low UV-transparent 96-well microplate was then transferred into the plate reader at an equilibrated temperature of 45 °C and

spectral well scans read through the sample at 5-degree decreases from 45 °C to 25 °C at $Abs._{450}$. All experiments were repeated in triplicate to ensure experimental reproducibility.

Hydrogel melting point (T_m) determination: Supramolecular hydrogels of **1** (5 mg/mL) in the appropriate aqueous salt solution (1 mL, 0.505 M) was transferred onto the bottom stainless steel plate geometry of an Anton Parr modular compact rheometer (MCR302) at room temperature. The temperature of this bottom rheometry plate geometry was then increased until the hydrogel underwent a gel-sol transition. The temperature at which this phase change occurred was recorded as the hydrogel melting point. Each experiment was run in triplicate. These data have been previously published.[1]

Fibre assembly temperature (T_{fa}) determination: This parameter was derived using the data produced from the spectral well scans (Figure 3) and resultant optical density maps (Figure 4). The fibre assembly temperature in this instance was defined as the temperature at which the average (n = 3) ratio of OD_{450} maximum and minimum values (the highest and lowest OD values recorded for a single well of a single sample at a single temperature) was found to be < 0.06.

Experimental reproducibility: To test the validity of experimental practices the following studies were undertaken; supramolecular hydrogels/solutions of **1** (1.5 mg/mL) in aqueous NaCl (0.505 M)/ H_2O were transferred as 200 µL aliquots to each well of a low UV-transparent 96-well microplate at a temperature higher than the melting point (T_m) of the material. These low UV-transparent 96-well microplates were then transferred into the plate reader at an equilibrated temperature of 45 °C where $Abs._{450}$ measurements were taken at 5-degree decreases from 45 °C to 25 °C. The $Abs._{450}$ variations between each microplate well were recorded to 2 standard deviations of the mean (2 σμ).

The volumes of solution/hydrogel supplied to each microplate well had a significant effect on the reproducibility of data. The addition of 200 µL afforded reproducible data sets, compared to 100 µL where the data was not as reliable. It is known that decreased volume, therefore shorter path lengths lead to a significantly greater error than those with increased volume and therefore a longer pathlength.[2]

Chemical synthesis

Compound 1: This compound was synthesised in line with our previously published methods. Proton NMR were found to match our previously published values.[3] ^{1}H NMR (400 MHz, 298.15 K, DMSO-d_6): δ: 9.25 (s, 1H), 7.95 – 7.75 (m, 4H), 7.58 (d, *J* = 8.74 Hz, 2H), 7.37 – 7.20 (m, 1H), 6.98 (t, *J* = 5.88 Hz, 1H), 3.96 (d, *J* = 5.88 Hz, 2H), 3.20 – 3.01 (m, 9H), 2.43 (s, 3H), 1.63 – 1.43 (m, 9H), 1.40 – 1.17 (m, 9H), 0.91 (t, *J* = 7.32 Hz, 12H).

UV-Vis spectroscopy

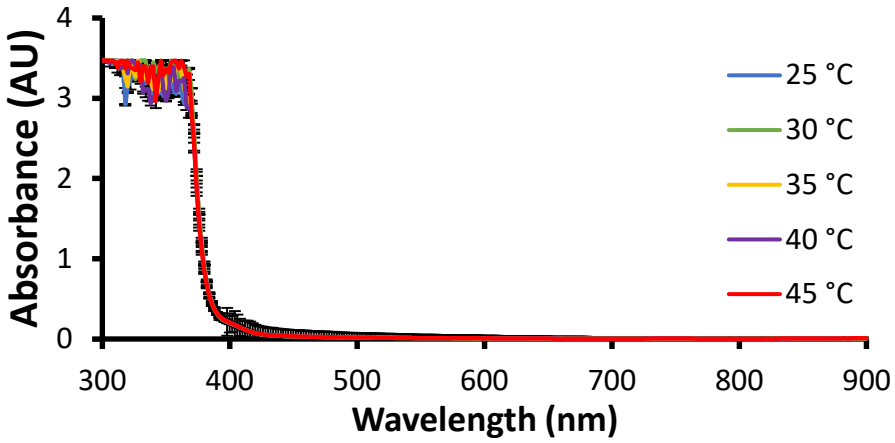

Figure S1 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in H_2O recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

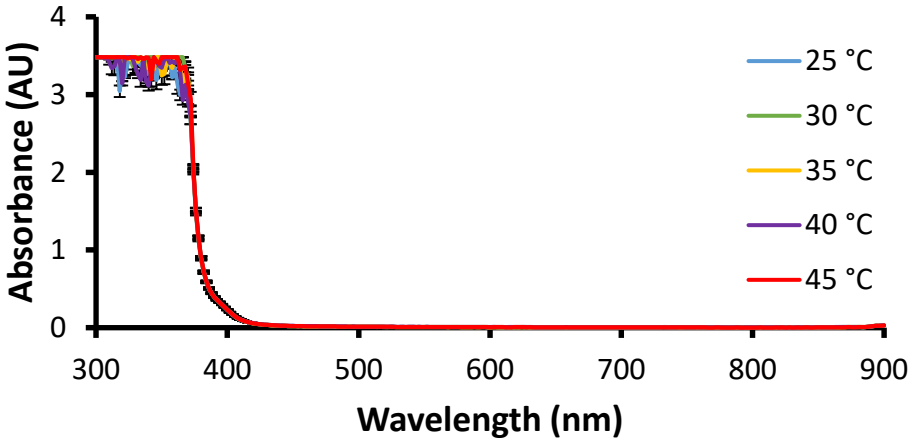

Figure S2 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in DMSO recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

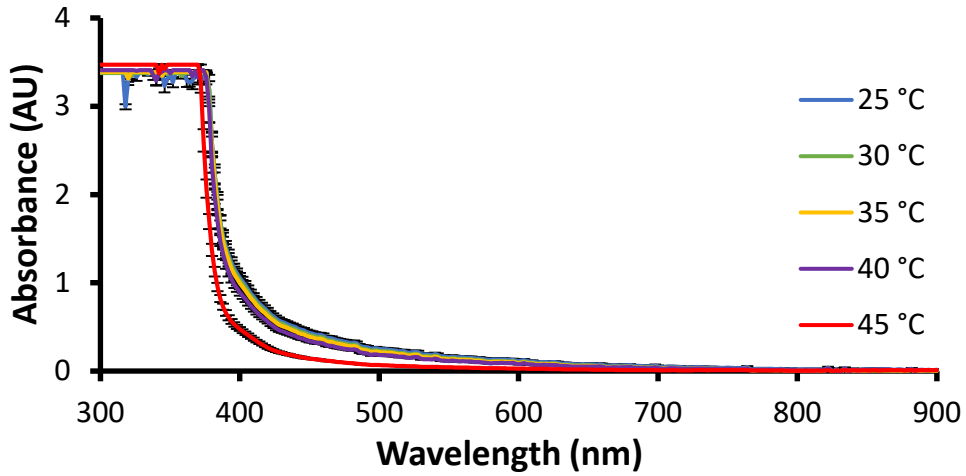

Figure S3 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

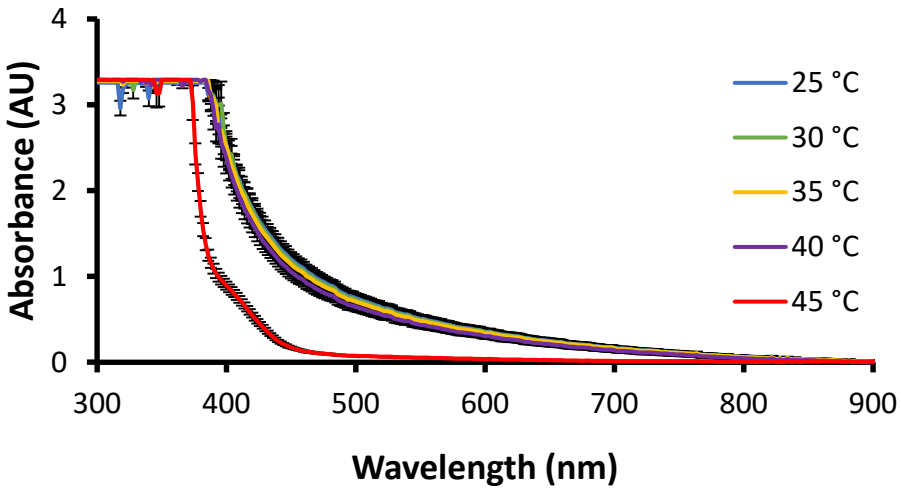

Figure S4 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

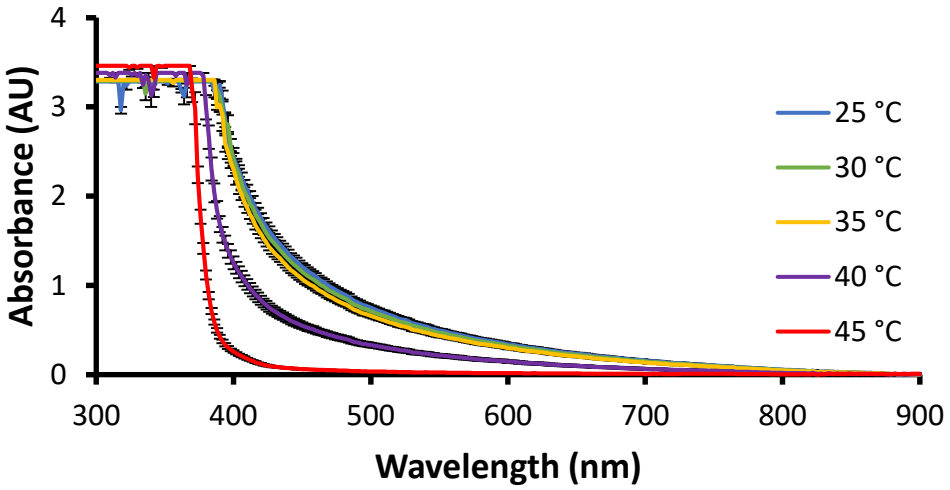

Figure S5 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

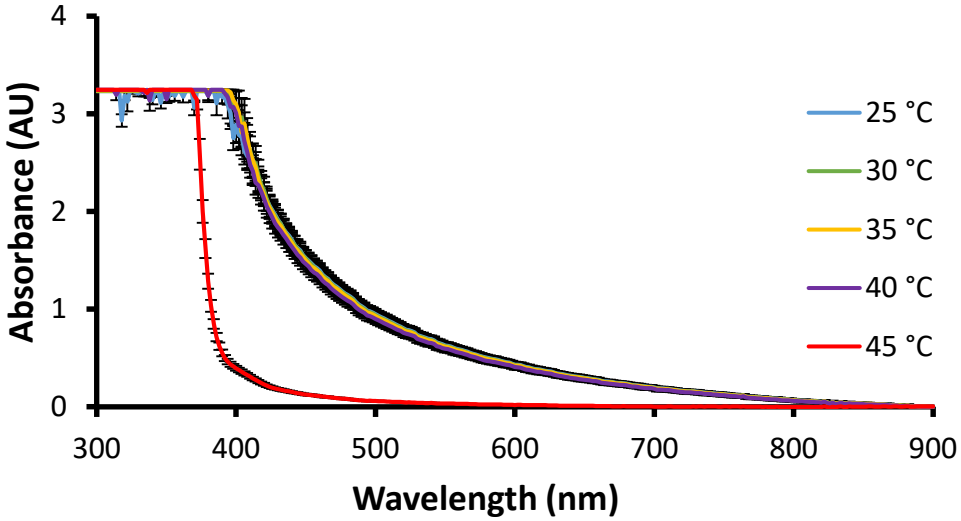

Figure S6 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

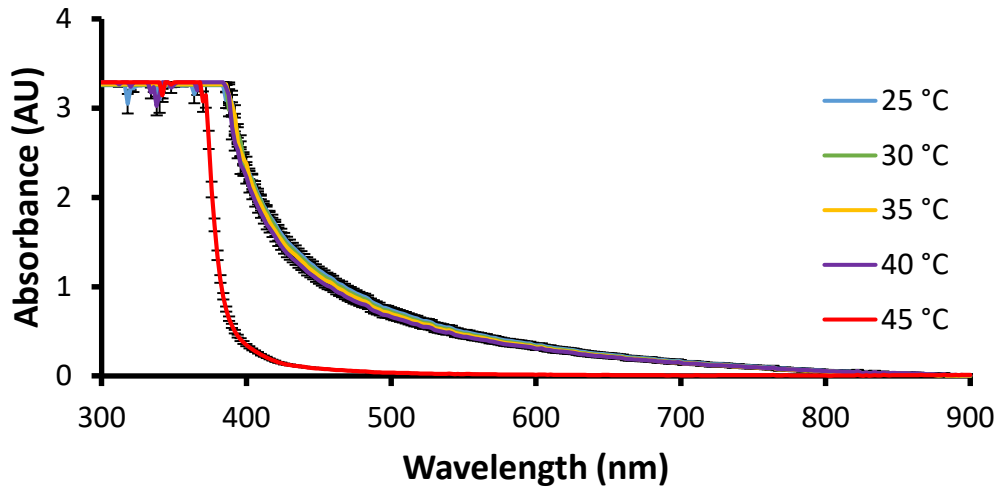

Figure S7 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

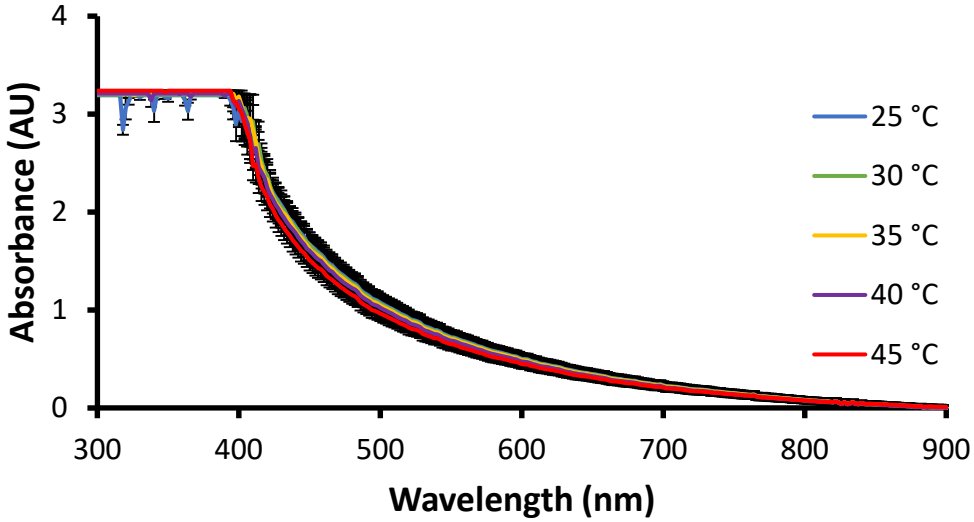

Figure S8 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

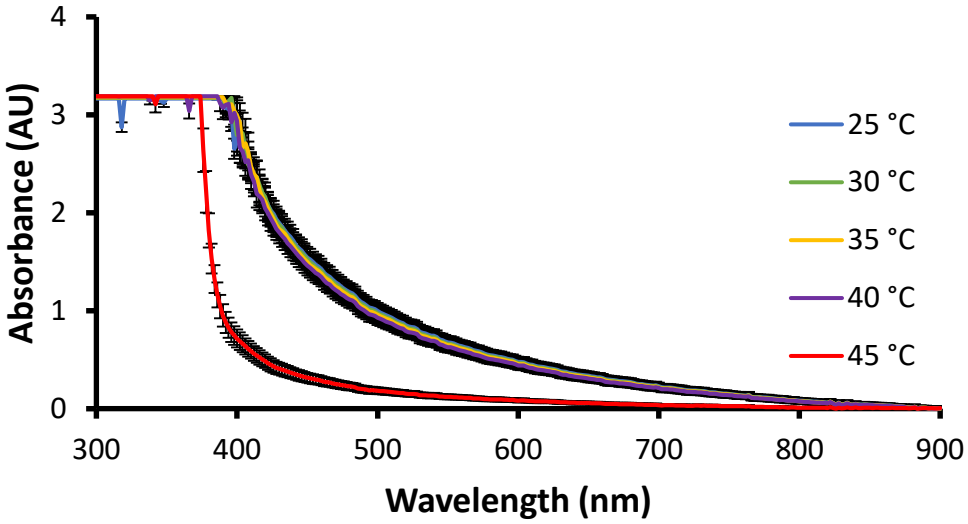

Figure S9 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous NaF (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

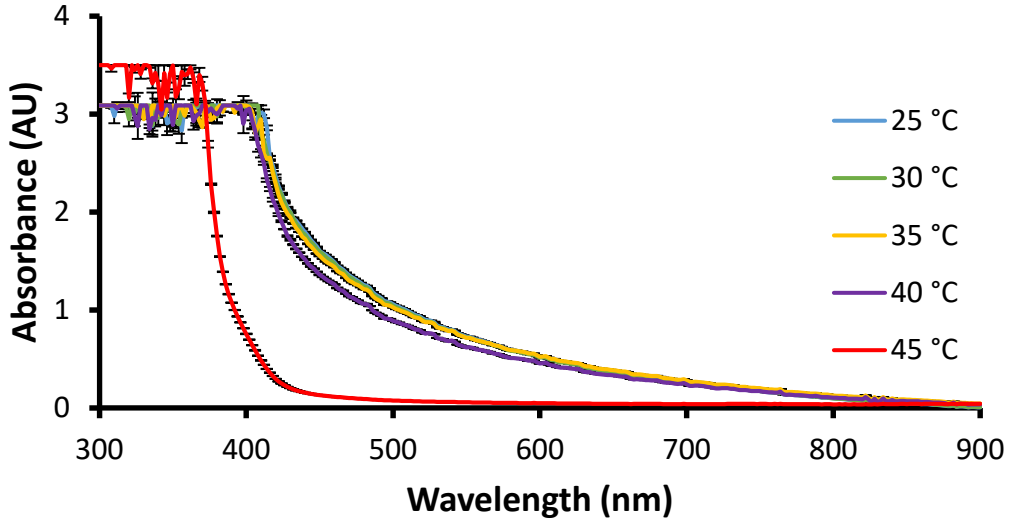

Figure S10 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous RbCl (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

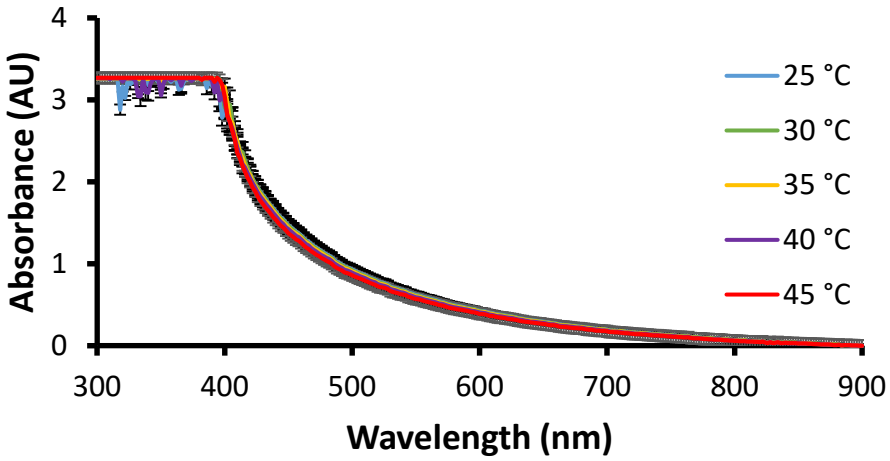

Figure S11 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous NaCl (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

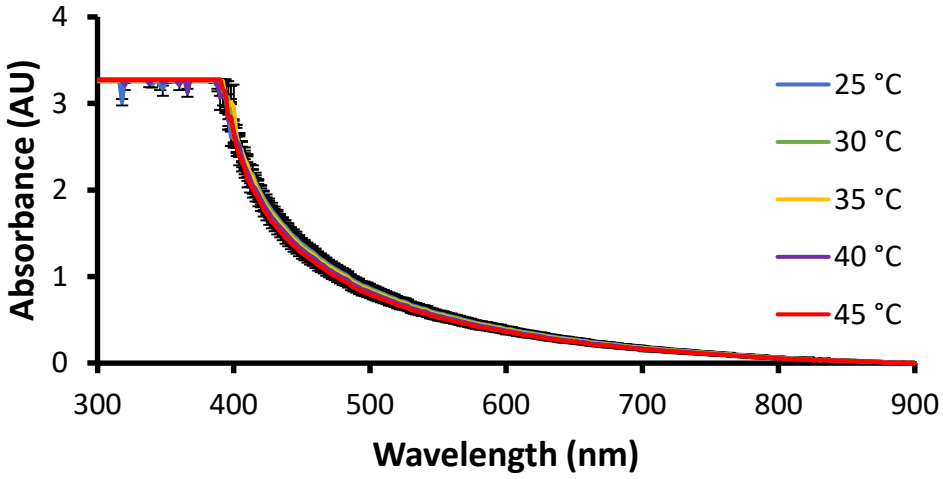

Figure S12 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

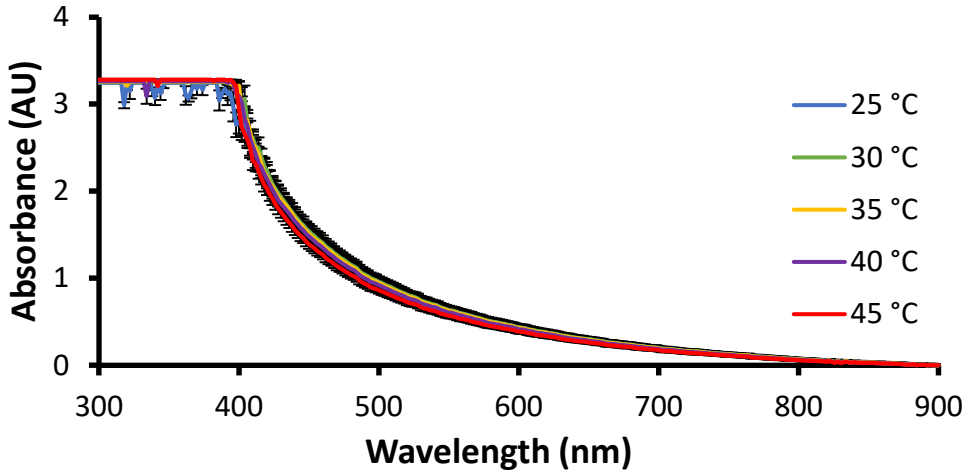

Figure S13 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

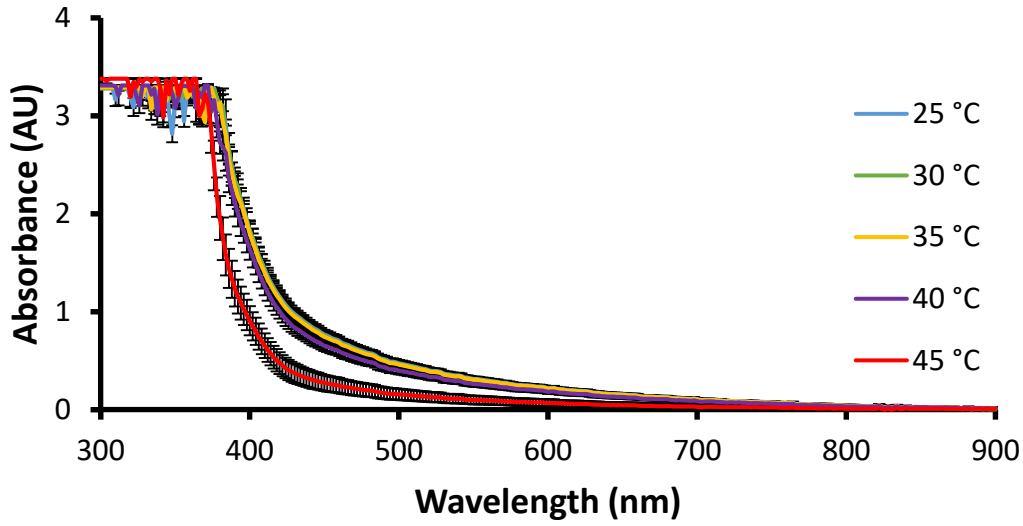

Figure S14 – Average (n=3) absorbance graph of **1** (1.5 mg/mL) in aqueous KCl (0.505 M) recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

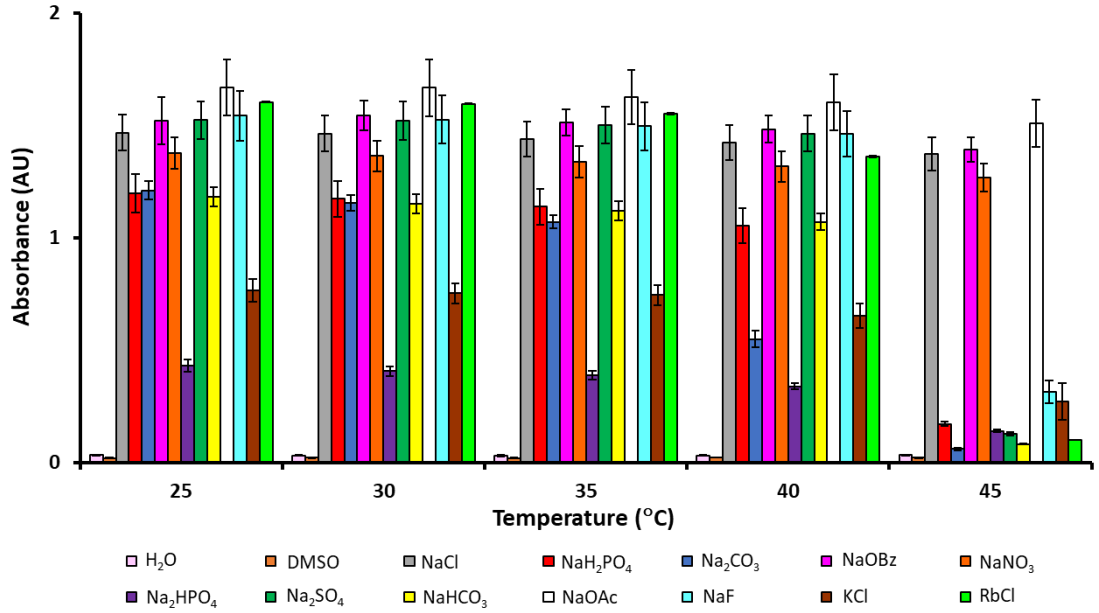

Figure S15 - Average (n=3) Abs.$_{450}$ values for solutions/partial/hydrogels of **1** (1.5 mg/mL) in H_2O, DMSO and various aqueous salt solutions (0.505 M) at 25-45 °C. Error bars represent the full range of Abs.$_{450}$ for three repetitions.

Overview

Table S1 - Average (n=3) absorbance values obtained at 450 nm (Abs.$_{450}$) for each 200 µL sample at 5-degree increments from 25-45 °C. Error = standard error of the mean.

Solution	**Temp (°C)**					**Solution**	**Temp (°C)**				
	25	30	35	40	45		25	30	35	40	45
H_2O	0.03 *± 0.00*	0.03 *± 0.00*	0.03 *± 0.00*	0.03 *± 0.00*	0.03 *± 0.00*	NaOAc	1.67 *± 0.12*	1.67 *± 0.13*	1.63 *± 0.12*	1.60 *± 0.12*	1.51 *± 0.10*
DMSO	0.02 *± 0.00*	0.02 *± 0.00*	0.02 *± 0.00*	0.02 *± 0.00*	0.02 *± 0.00*	NaF	1.54 *± 0.11*	1.53 *± 0.11*	1.50 *± 0.11*	1.46 *± 0.10*	0.31 *± 0.05*
Na_2HPO_4	0.43 *± 0.03*	0.41 *± 0.02*	0.39 *± 0.02*	0.34 *± 0.01*	0.14 *± 0.01*	RbCl	1.60 *± 0.00*	1.60 *± 0.00*	1.55 *± 0.00*	1.36 *± 0.00*	0.10 *± 0.00*
NaH_2PO_4	1.20 *± 0.09*	1.17 *± 0.08*	1.14 *± 0.08*	1.05 *± 0.08*	0.17 *± 0.01*	NaCl	1.47 *± 0.08*	1.46 *± 0.08*	1.44 *± 0.08*	1.42 *± 0.08*	1.37 *± 0.07*
Na_2CO_3	1.21 *± 0.04*	1.15 *± 0.04*	1.07 *± 0.03*	0.55 *± 0.04*	0.06 *± 0.01*	$NaNO_3$	1.38 *± 0.07*	1.36 *± 0.07*	1.34 *± 0.07*	1.32 *± 0.07*	1.27 *± 0.06*
Na_2SO_4	1.52 *± 0.08*	1.52 *± 0.09*	1.50 *± 0.08*	1.46 *± 0.08*	0.13 *± 0.01*	NaOBz	1.52 *± 0.10*	1.54 *± 0.07*	1.51 *± 0.06*	1.48 *± 0.06*	1.39 *± 0.05*
$NaHCO_3$	1.18 *± 0.04*	1.15 *± 0.04*	1.12 *± 0.04*	1.07 *± 0.04*	0.08 *± 0.00*	KCl	0.77 *± 0.05*	0.75 *± 0.05*	0.75 *± 0.05*	0.65 *± 0.06*	0.27 *± 0.08*

Spectral well-scans

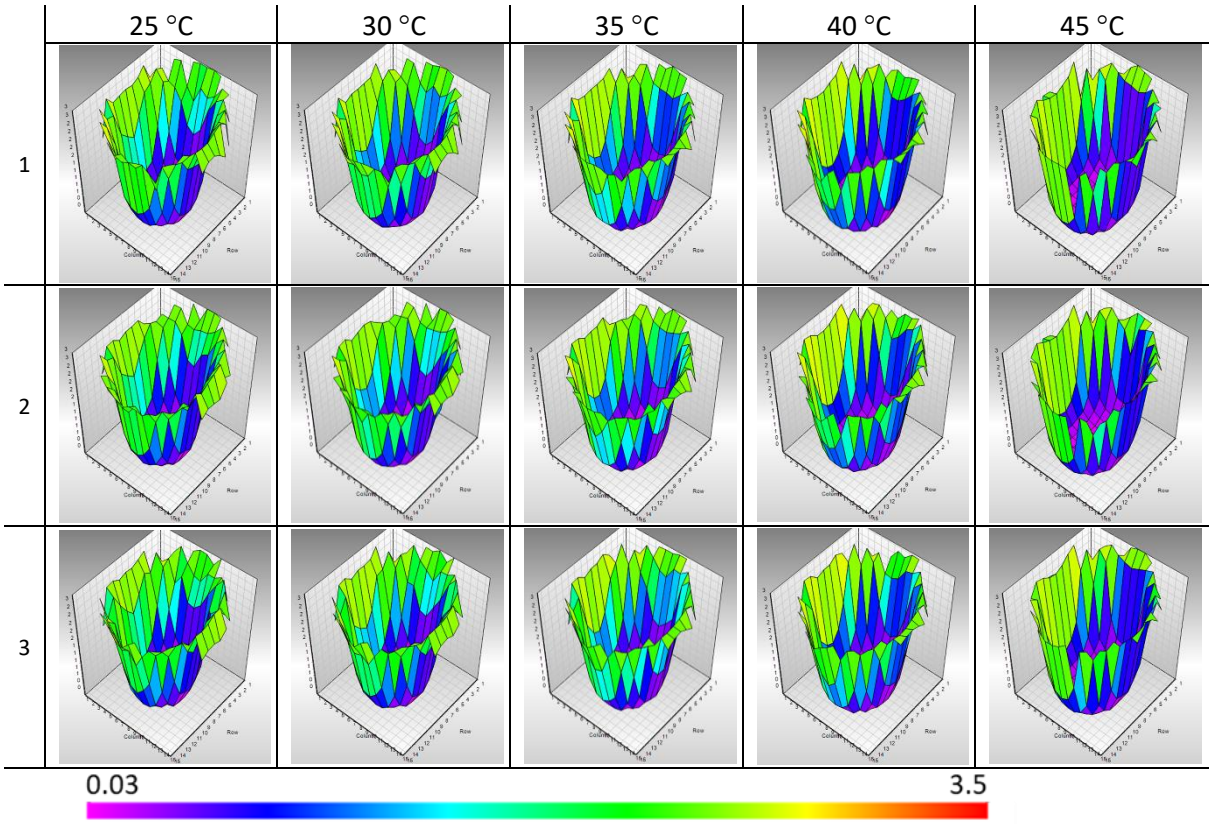

Figure S16 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in H_2O, recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

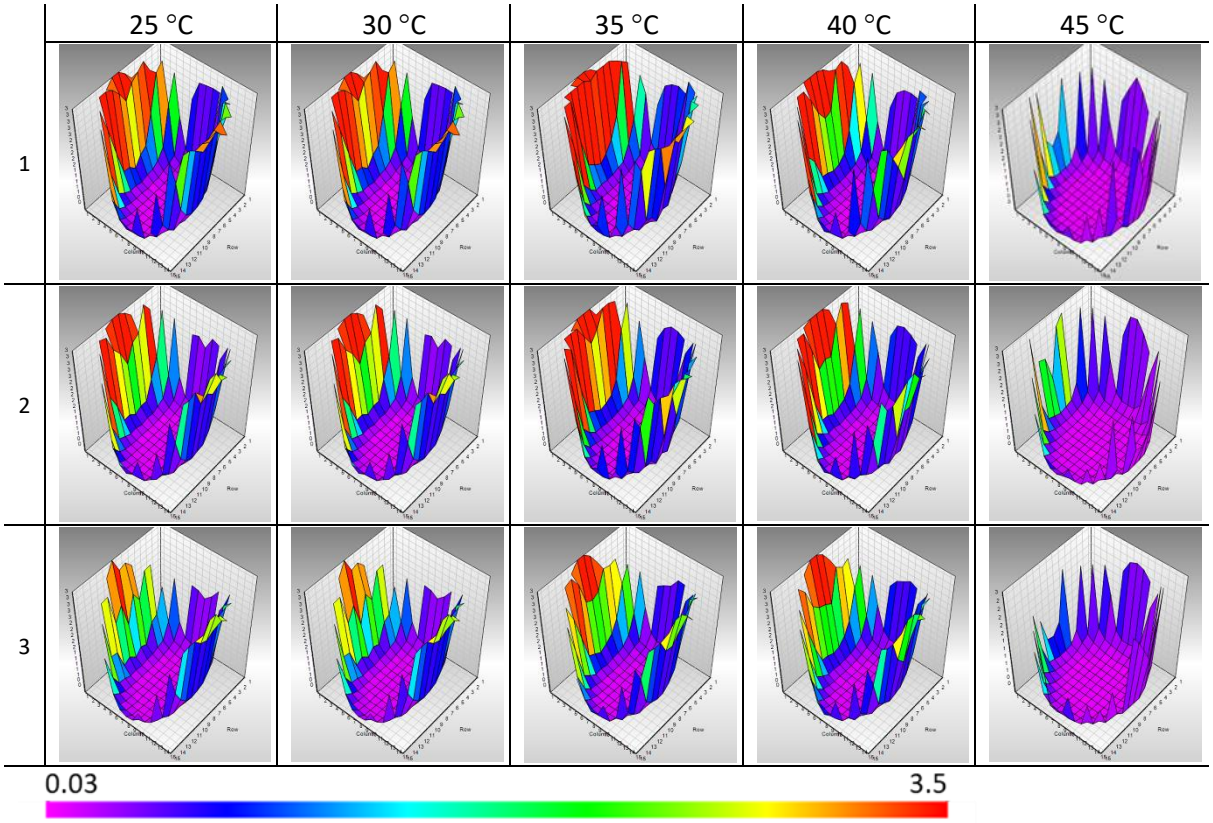

Figure S17 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in DMSO, recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

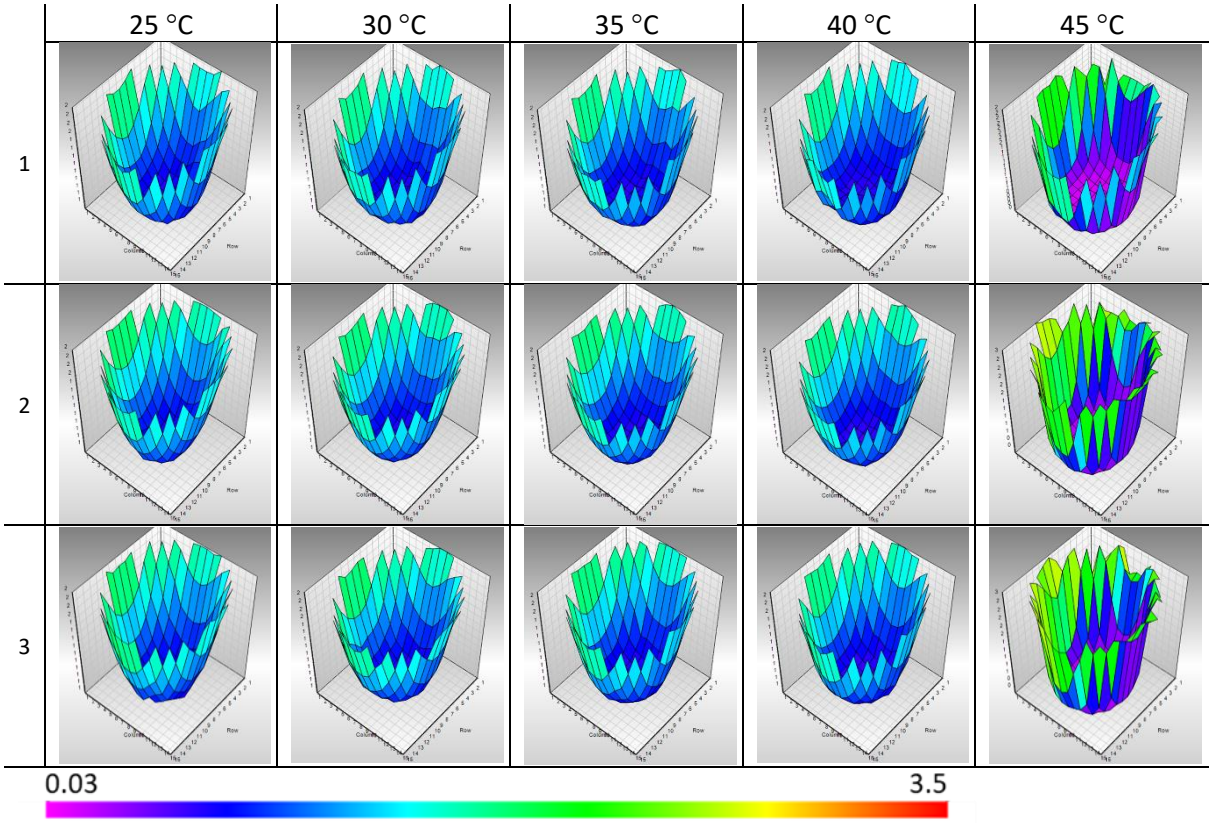

Figure S18 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

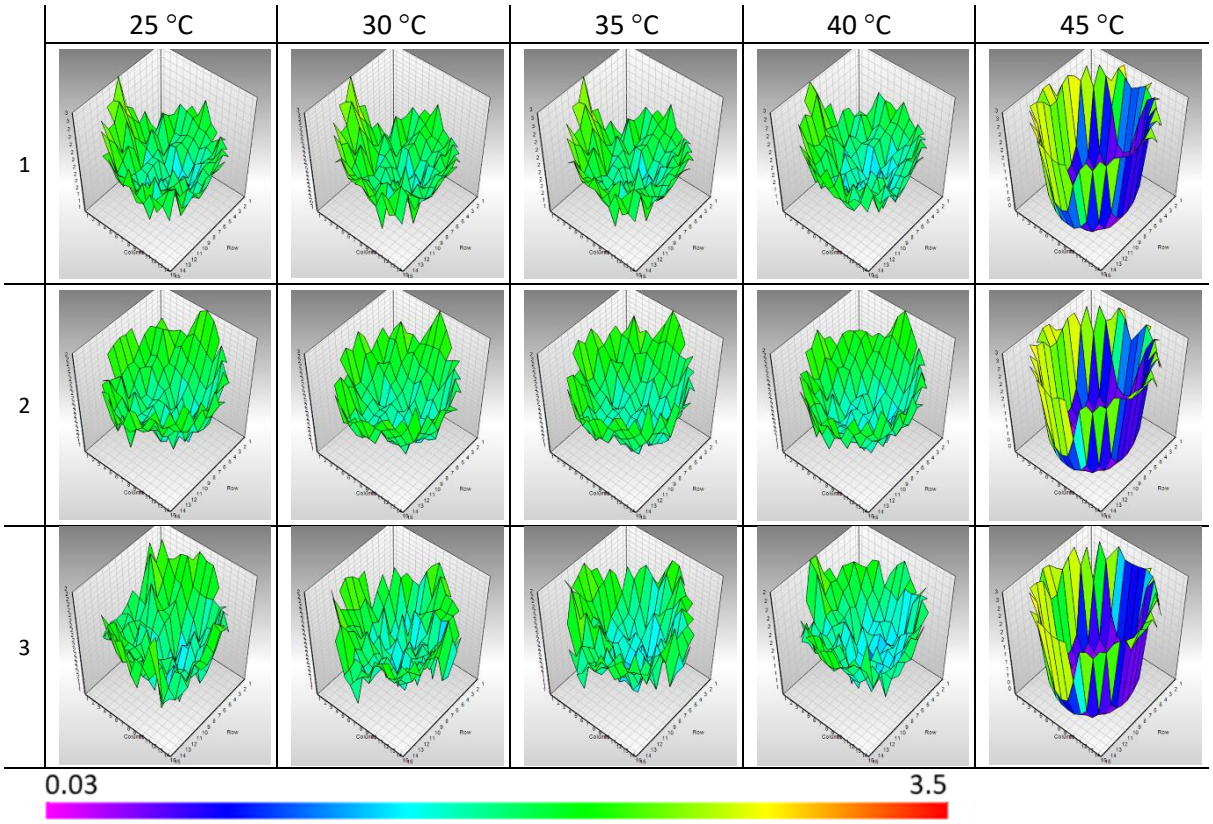

Figure S19 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

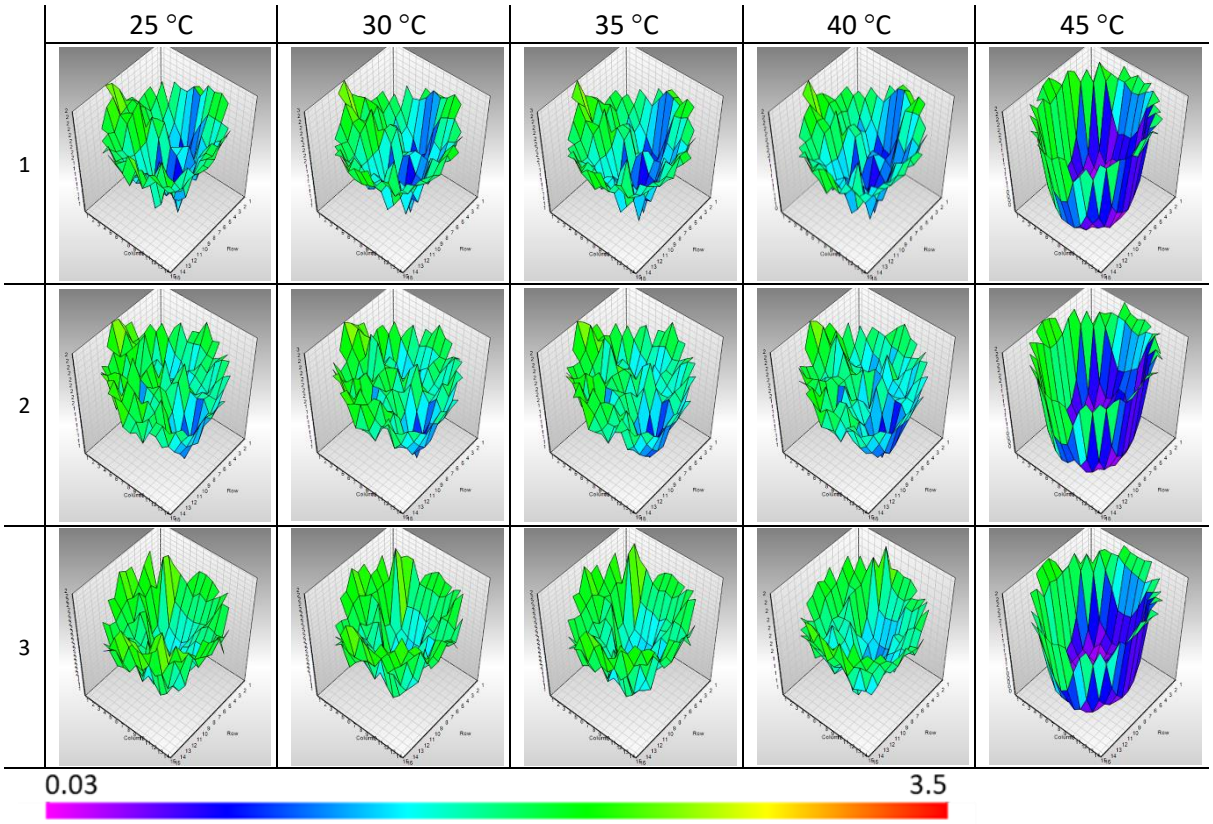

Figure S20 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

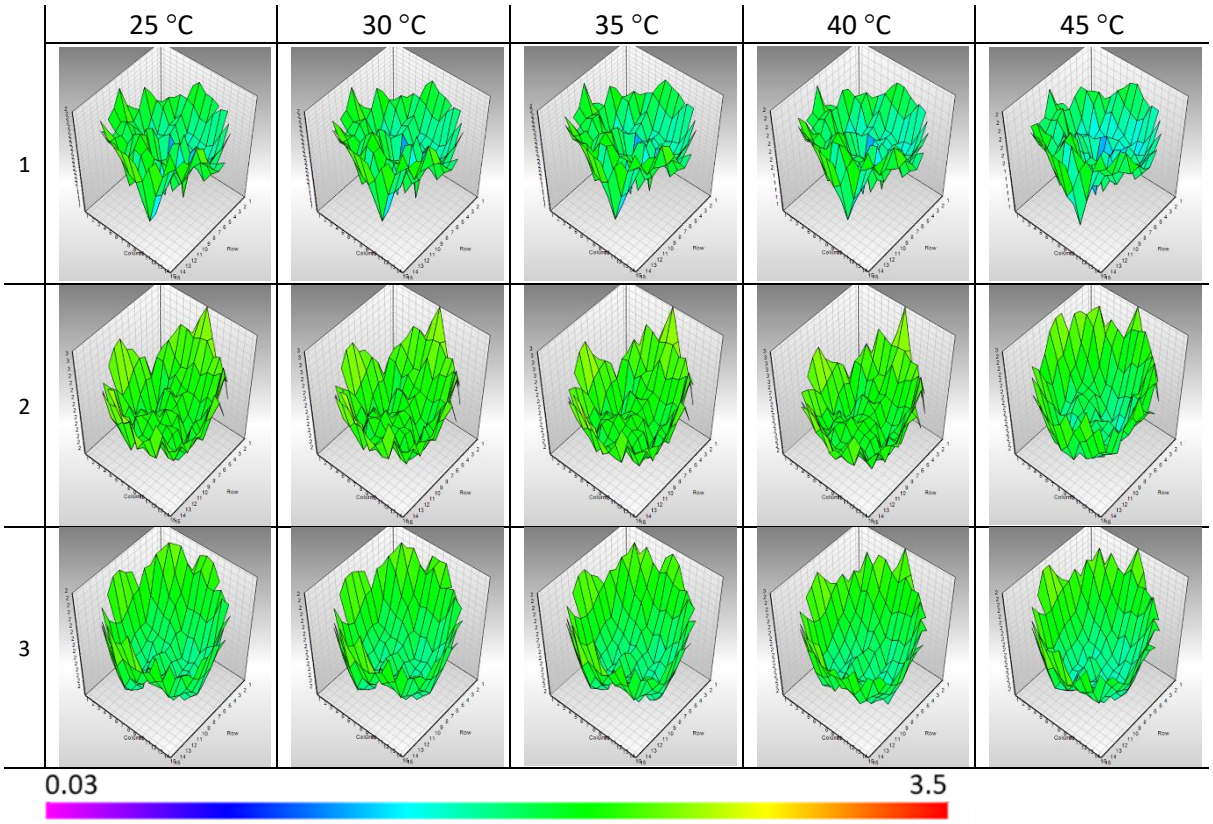

Figure S21 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

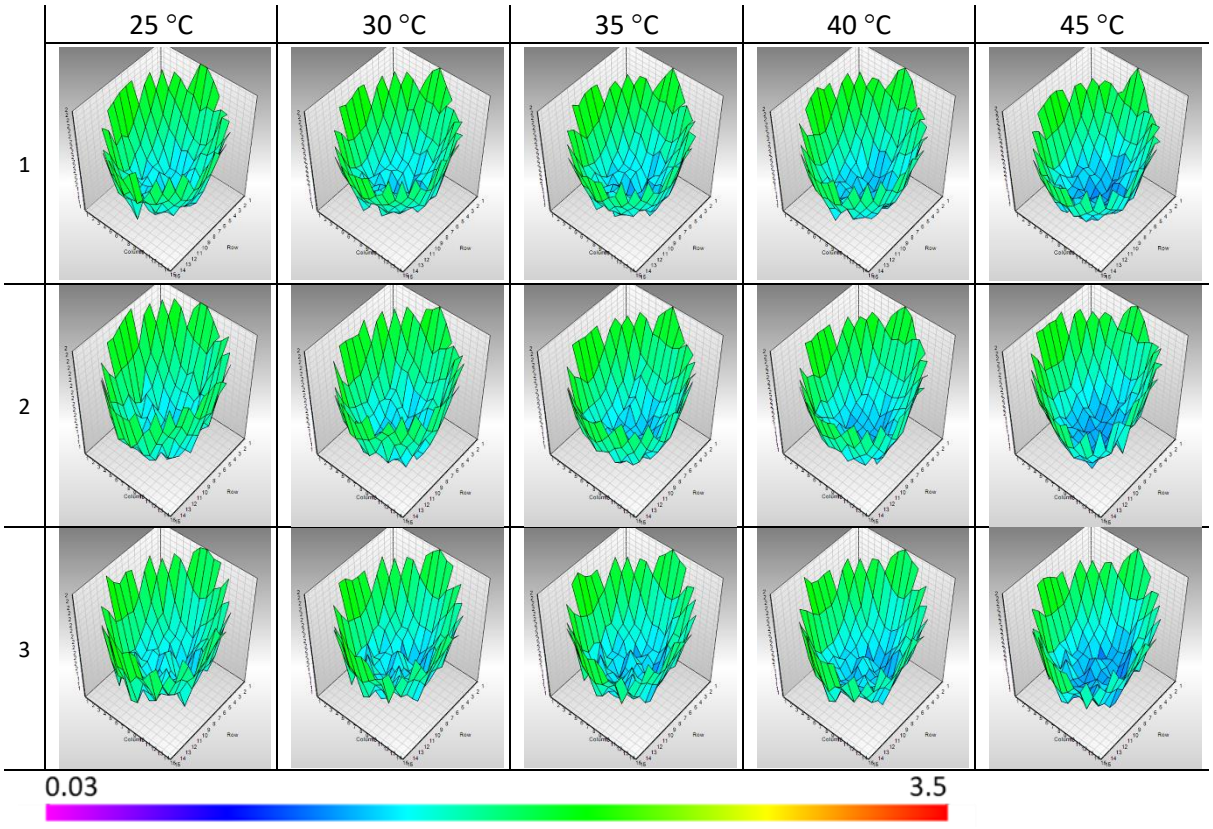

Figure S22 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

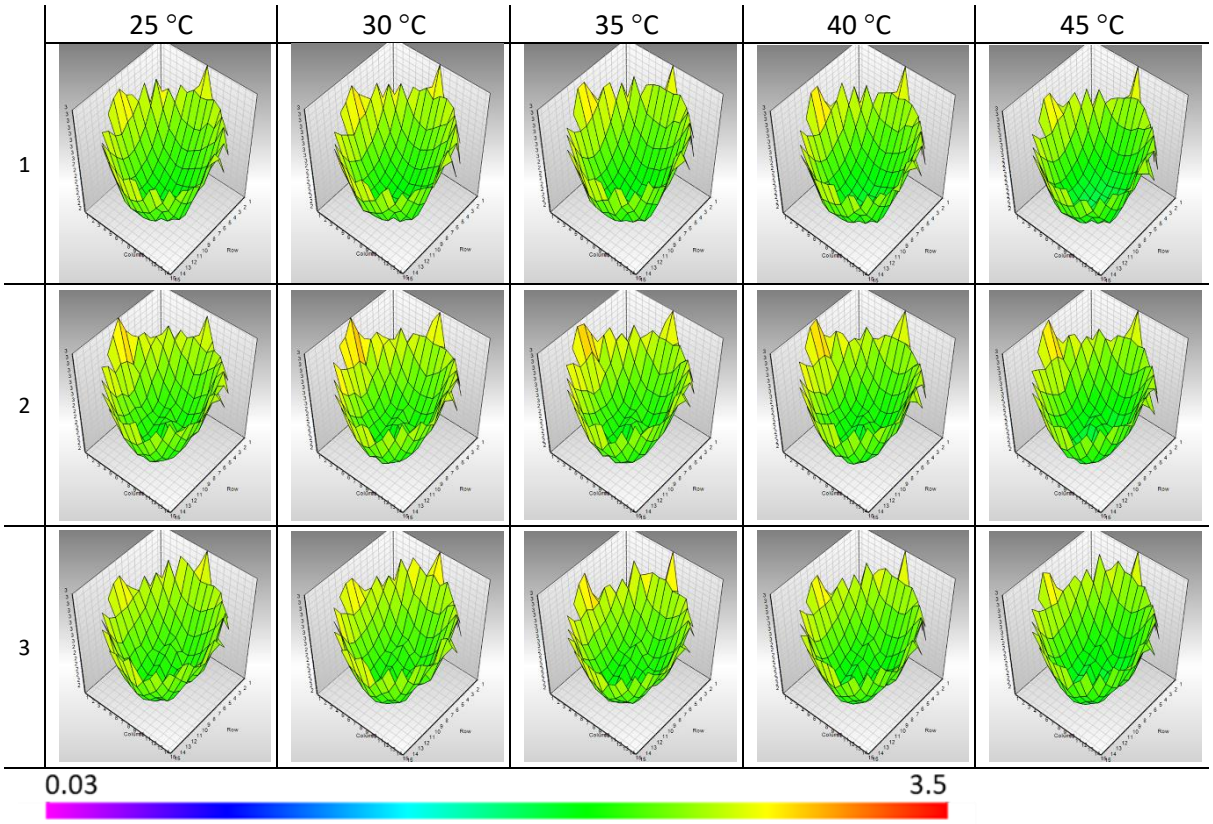

Figure S23 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

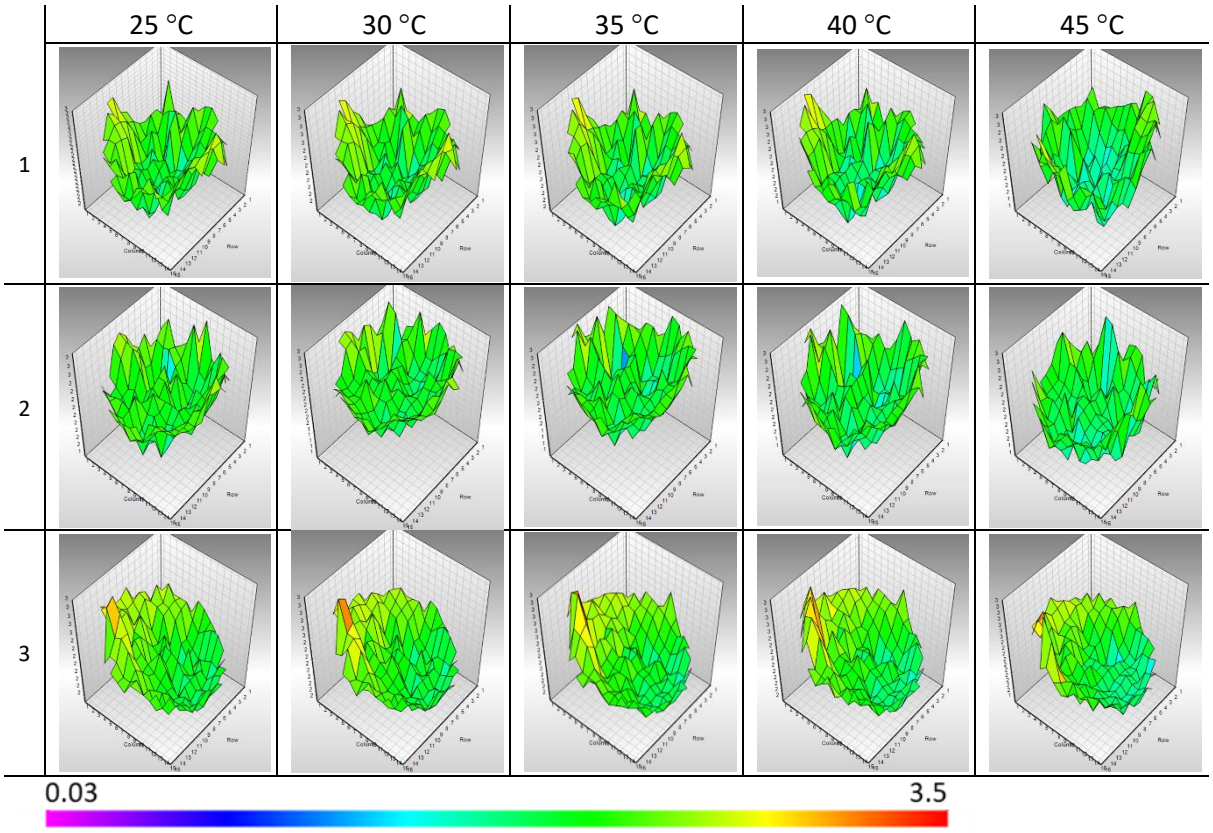

Figure S24 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous NaF (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

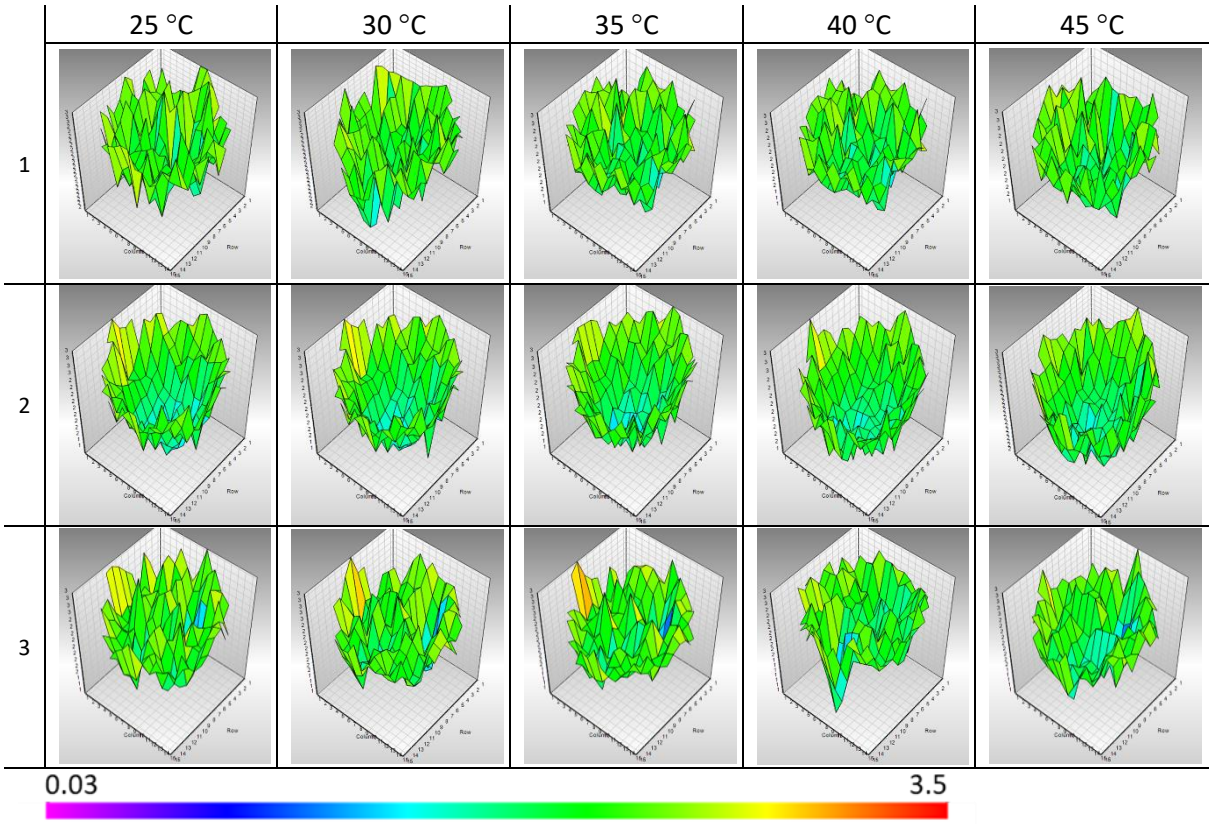

Figure S25 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous RbCl (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

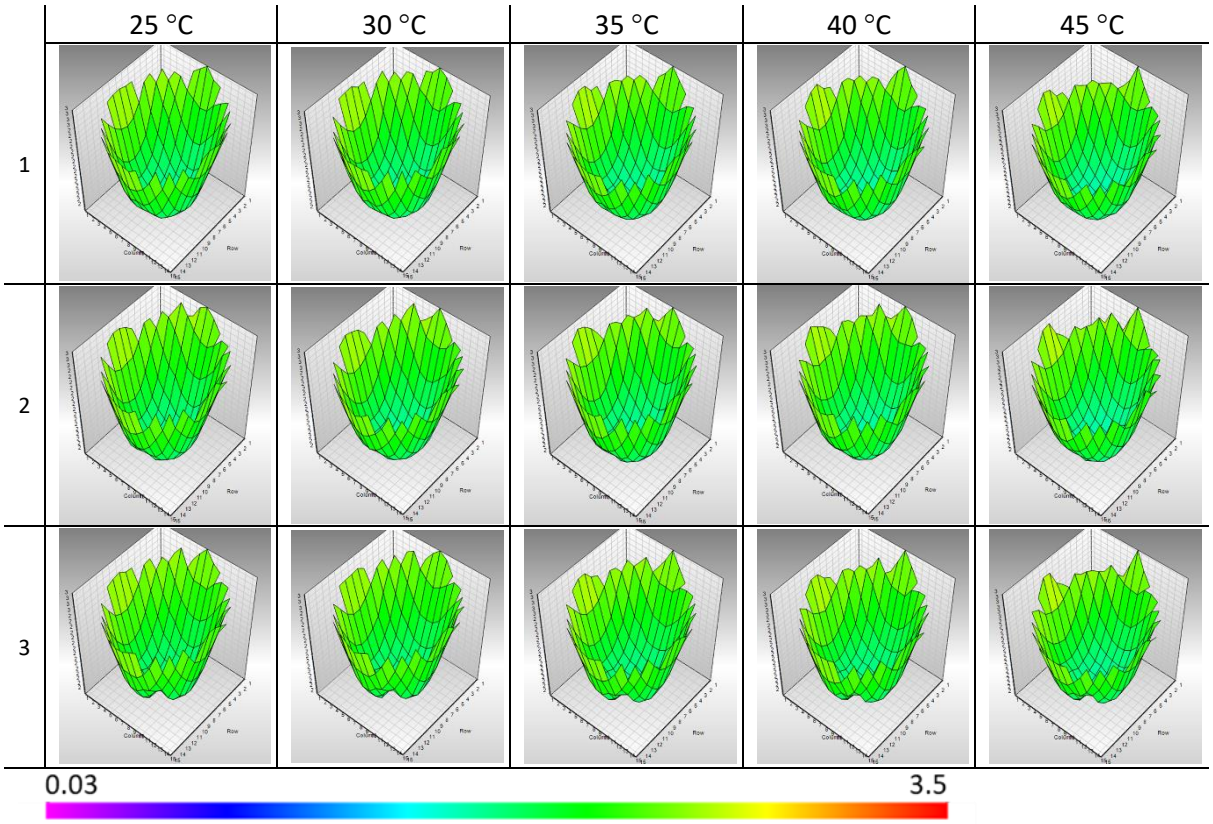

Figure S26 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous NaCl (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

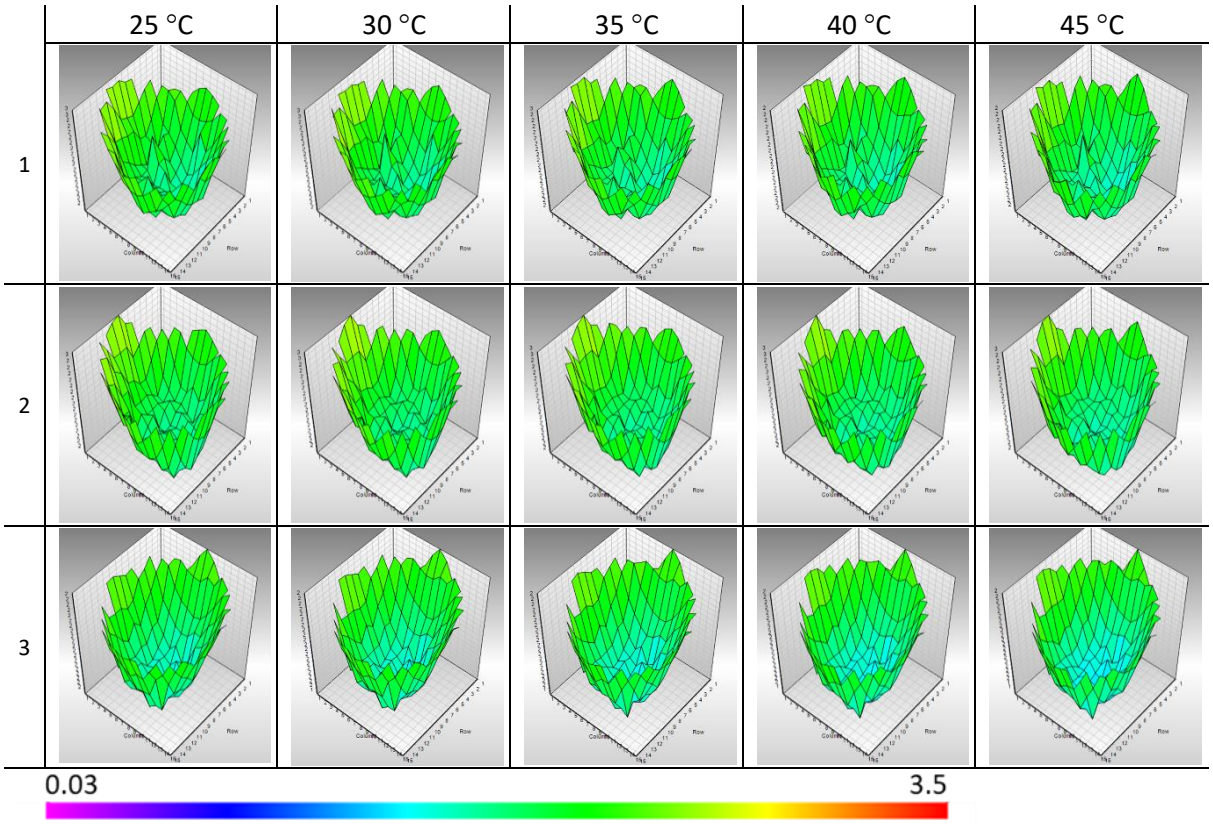

Figure S27 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

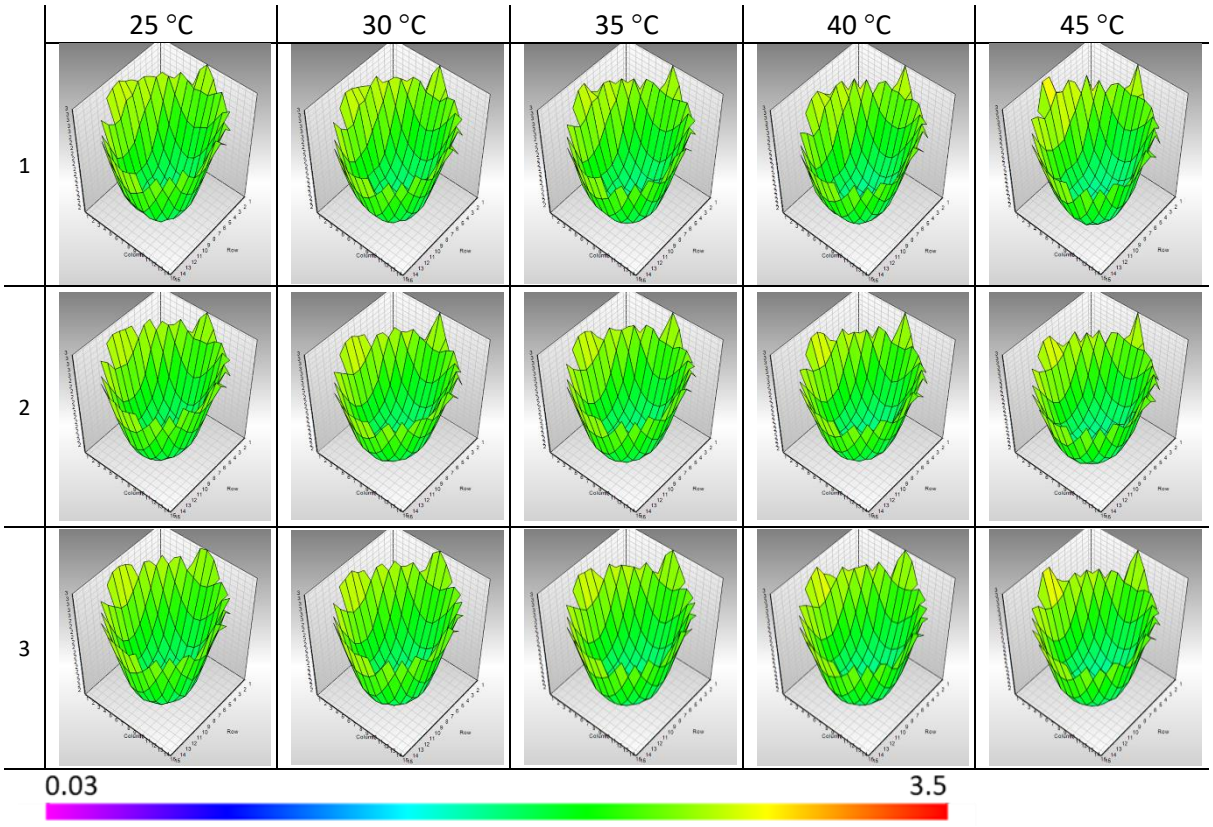

Figure S28 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

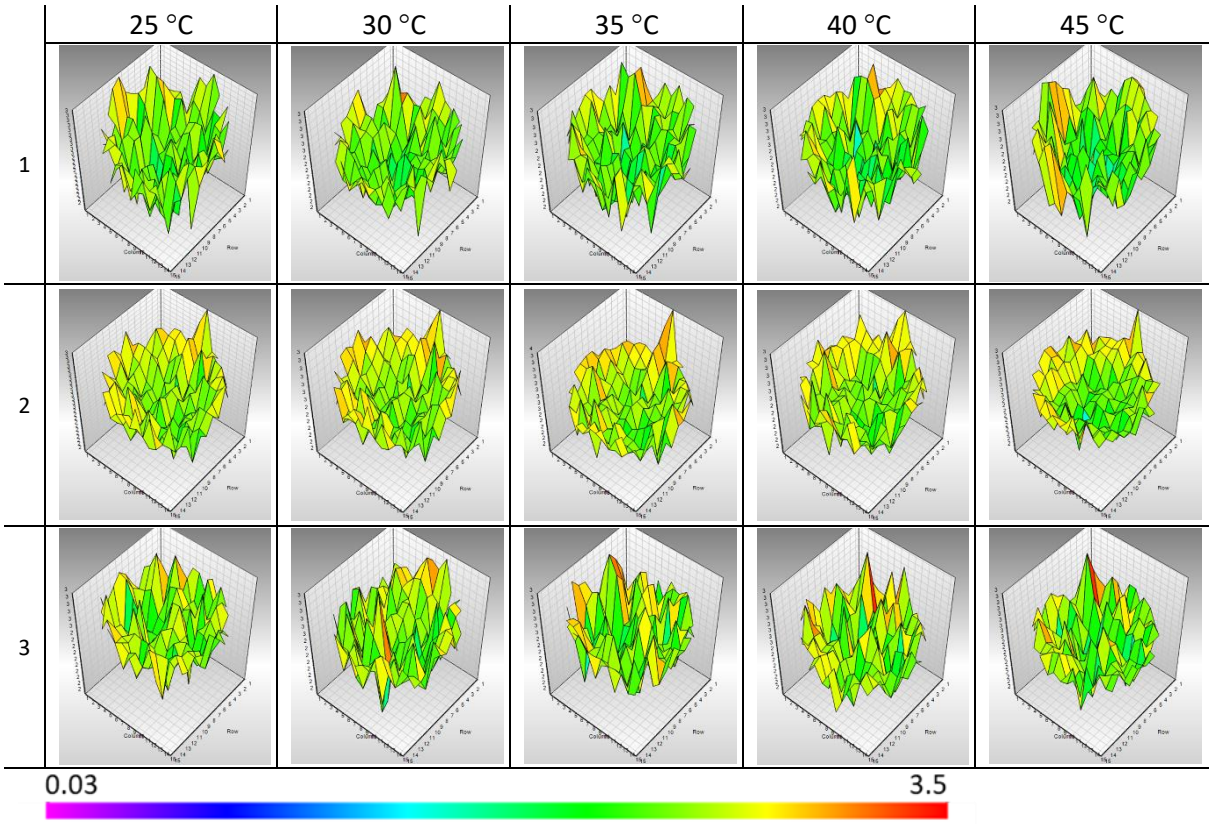

Figure S29 - Spectral analysis well scans (n=3) conducted at OD_{450} with **1** (1.5 mg/mL) in aqueous KCl (0.505 M), recorded for each 200 µL sample at 5-degree increments from 25-45 °C.

Optical density intensity maps

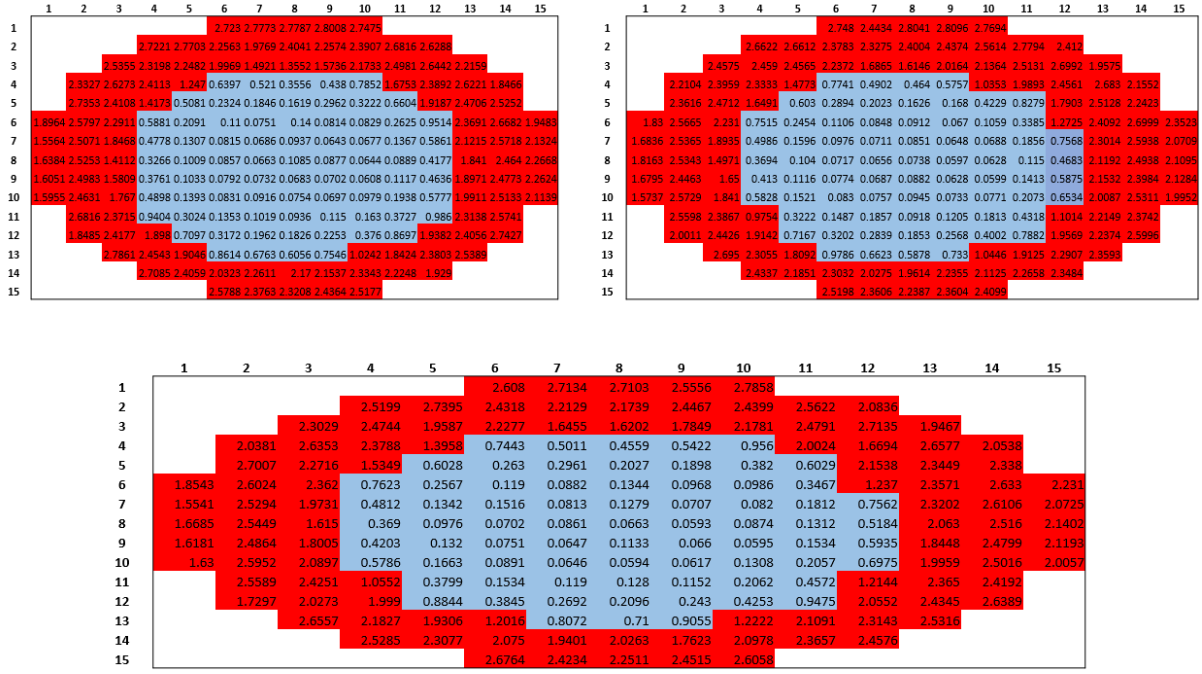

Figure S30 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in H_2O at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

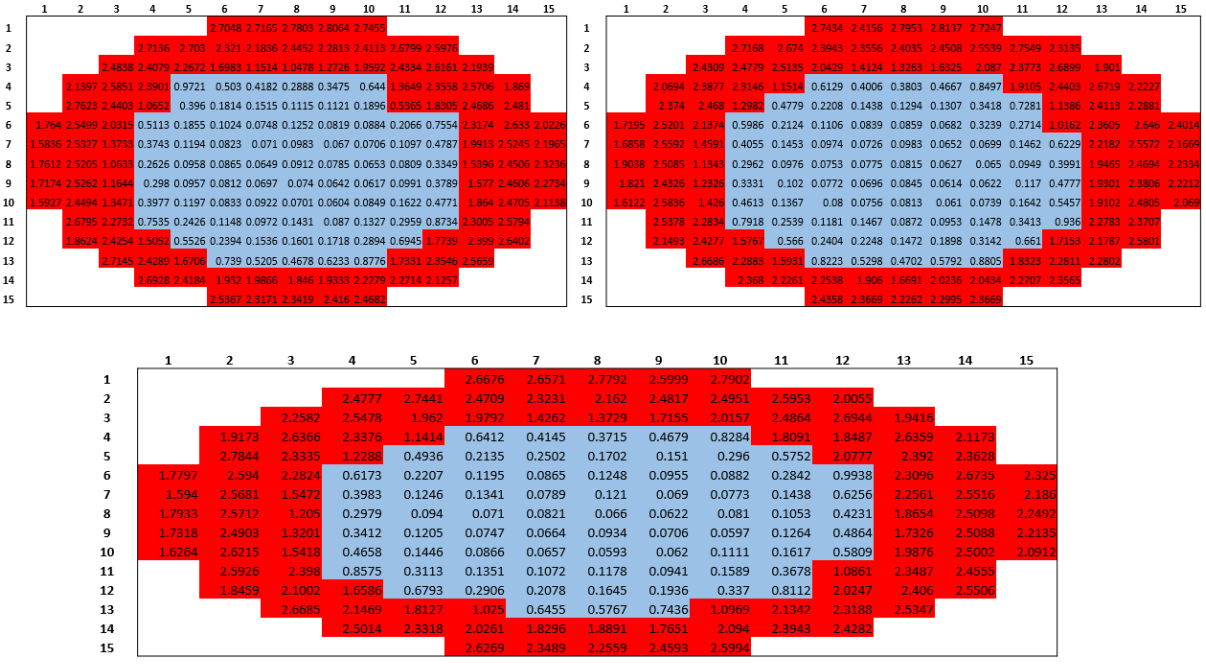

Figure S31 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in H_2O at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

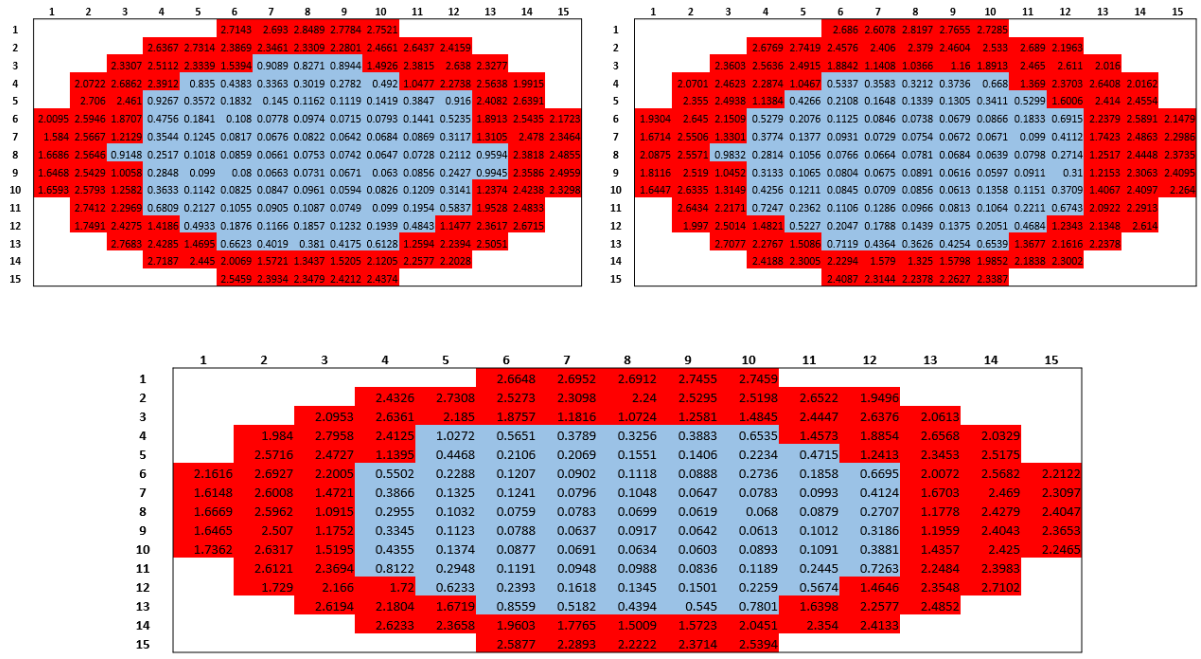

Figure S32 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in H_2O at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

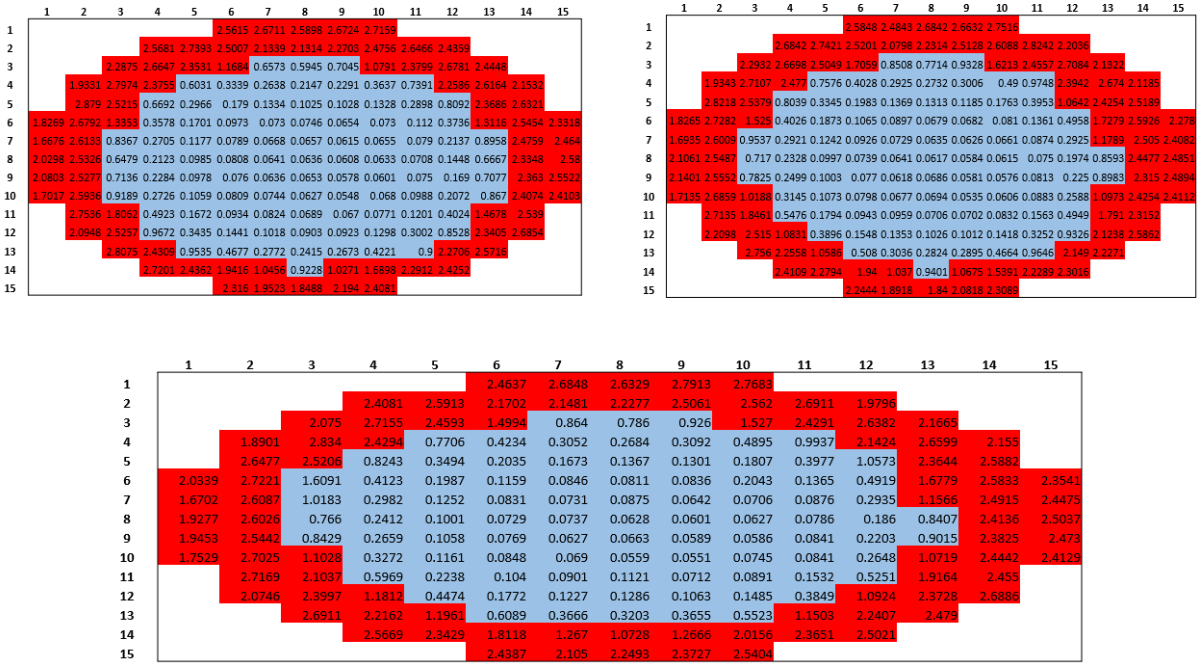

Figure S33 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in H_2O at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

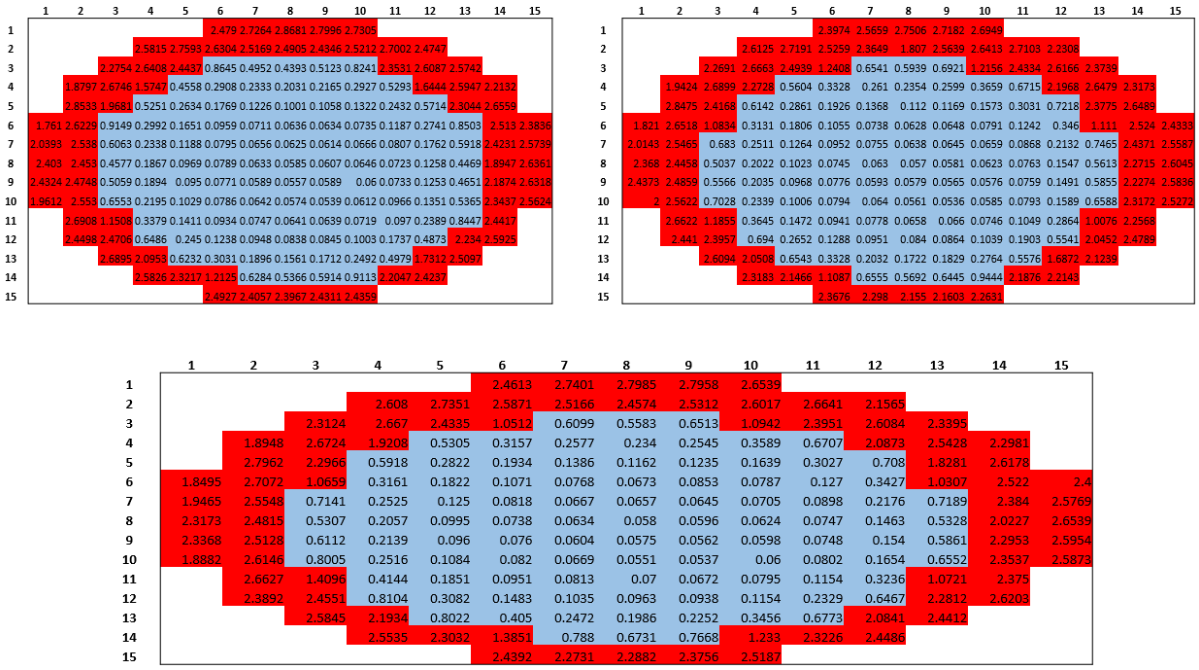

Figure S34 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in H_2O at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

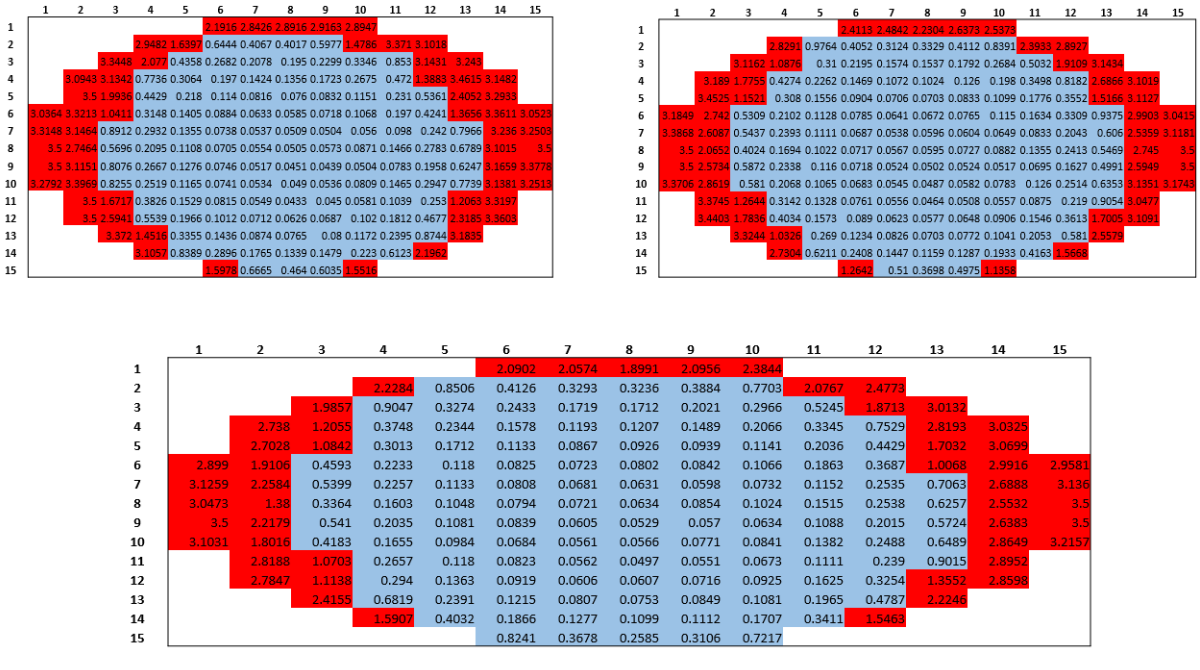

Figure S35 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in DMSO at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

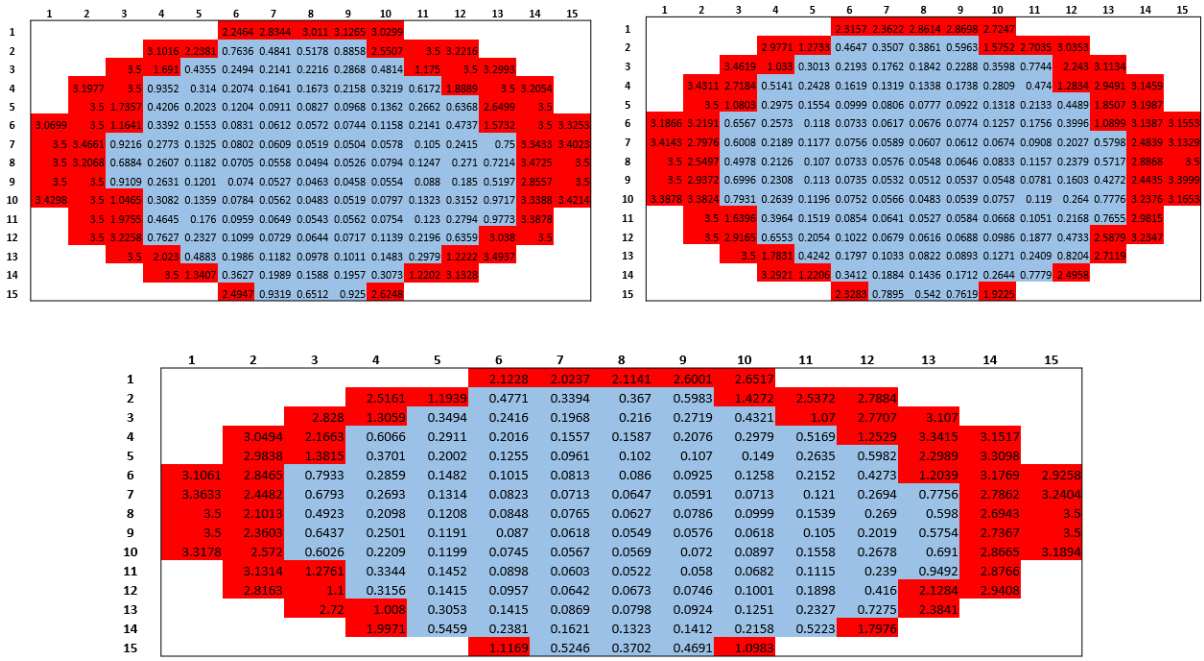

Figure S36 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in DMSO at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

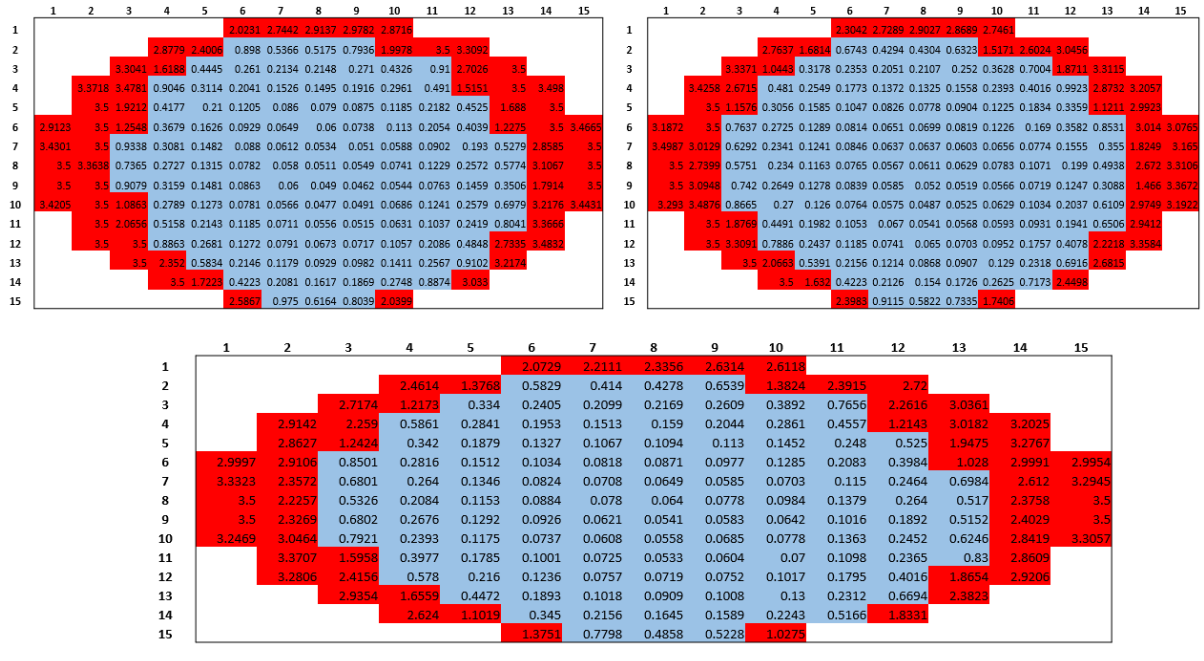

Figure S37 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in DMSO at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

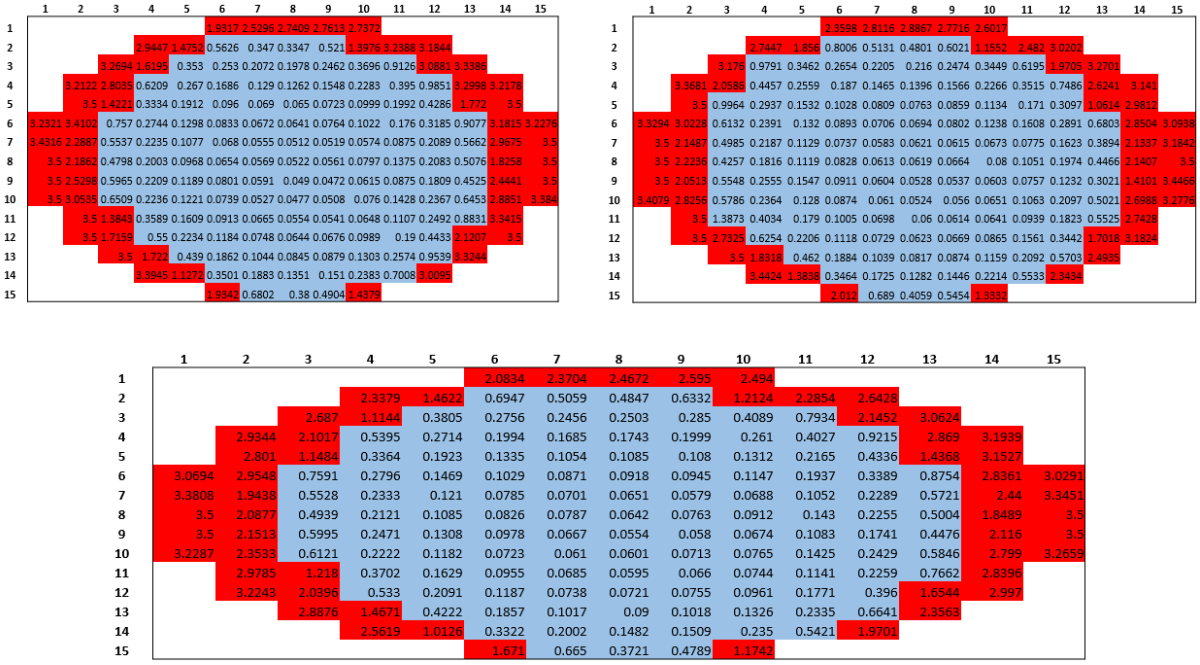

Figure S38 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in DMSO at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

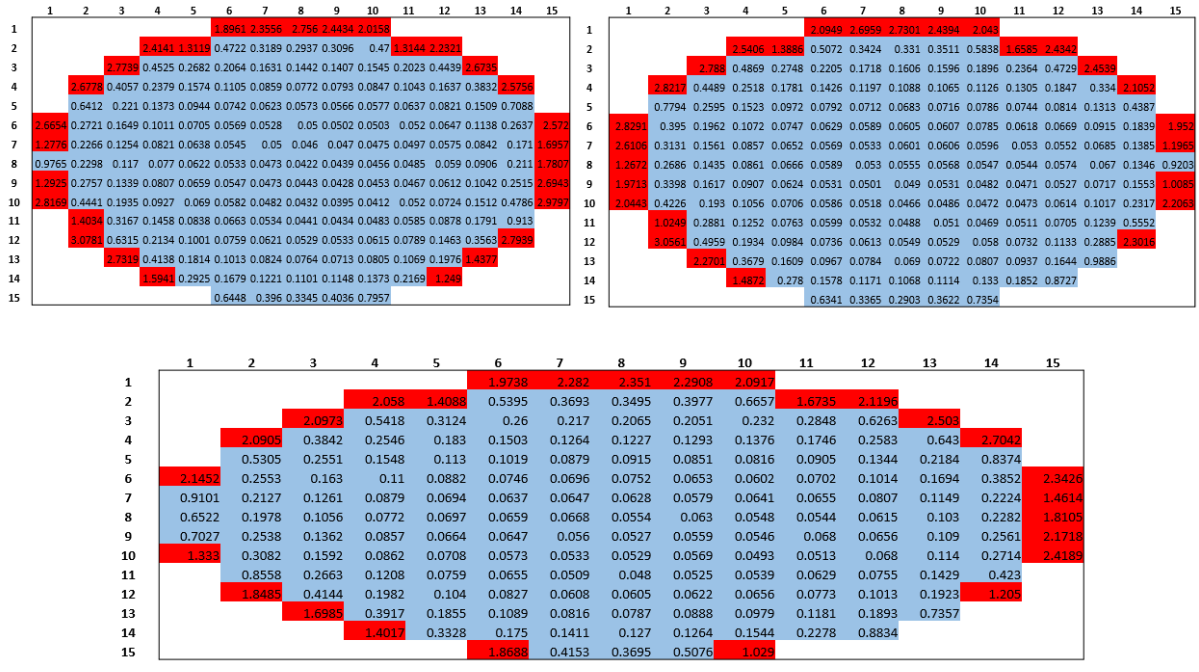

Figure S39 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in DMSO at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

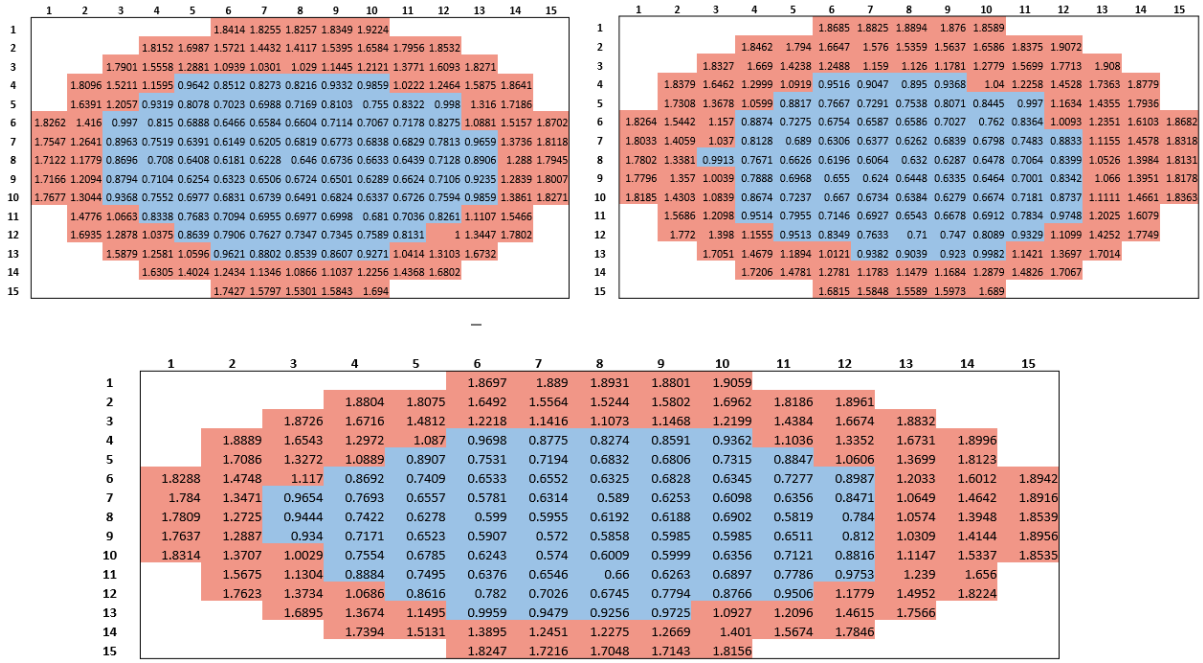

Figure S40 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

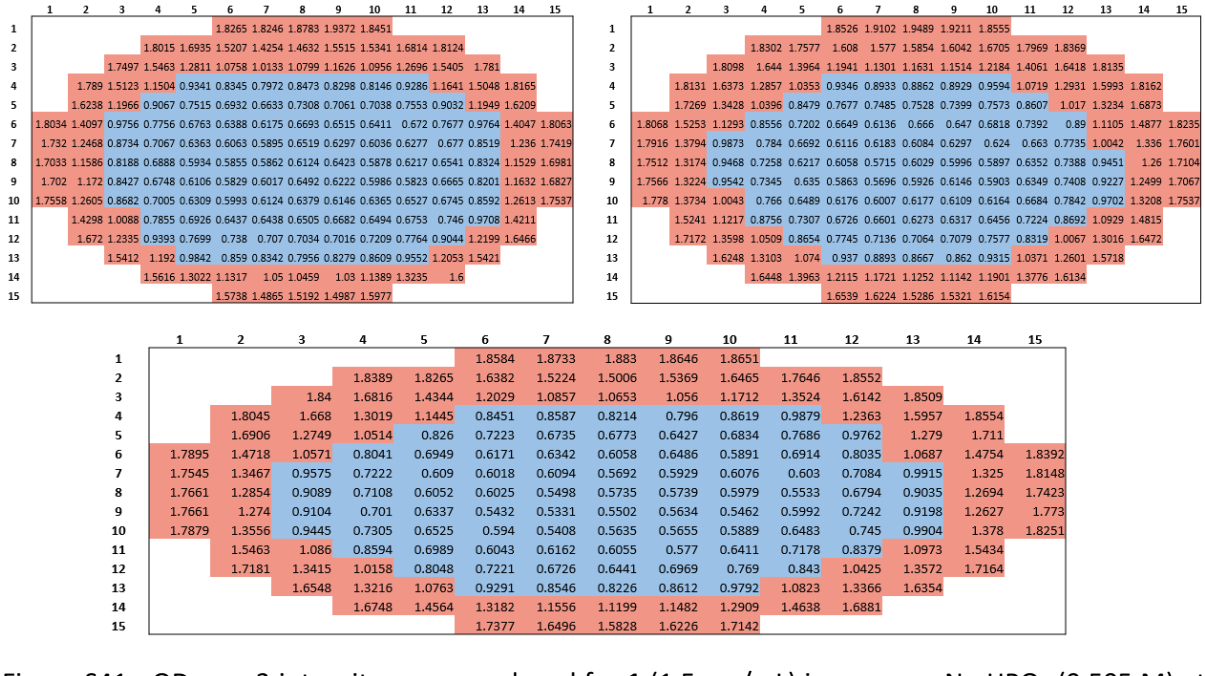

Figure S41 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

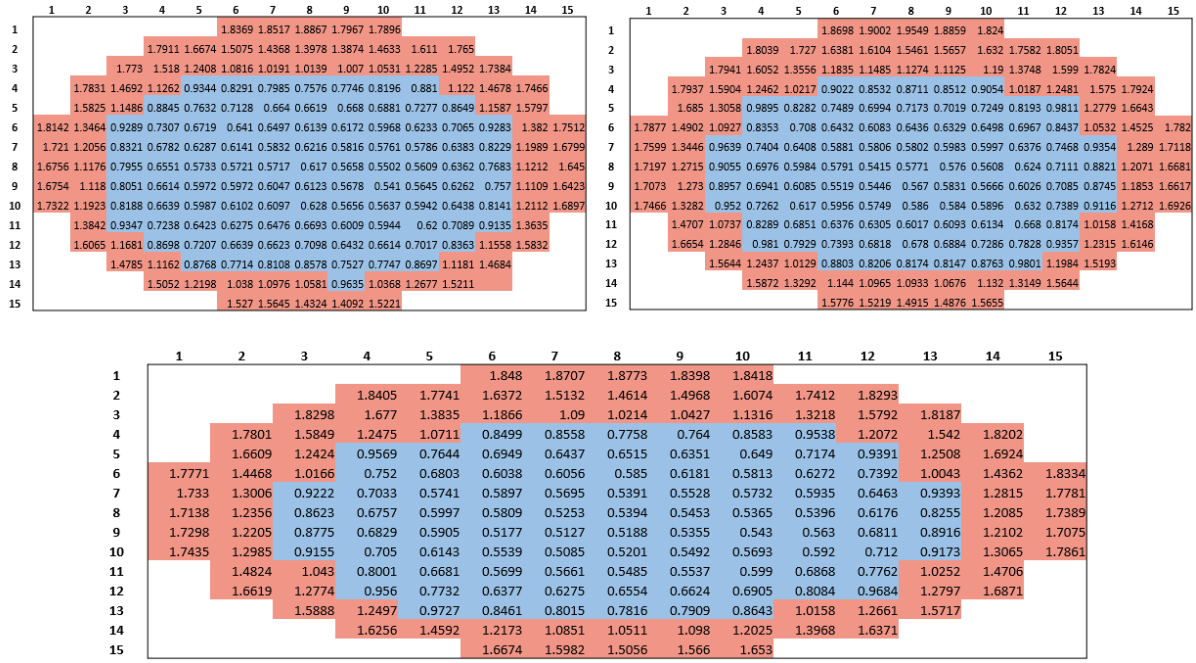

Figure S42 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

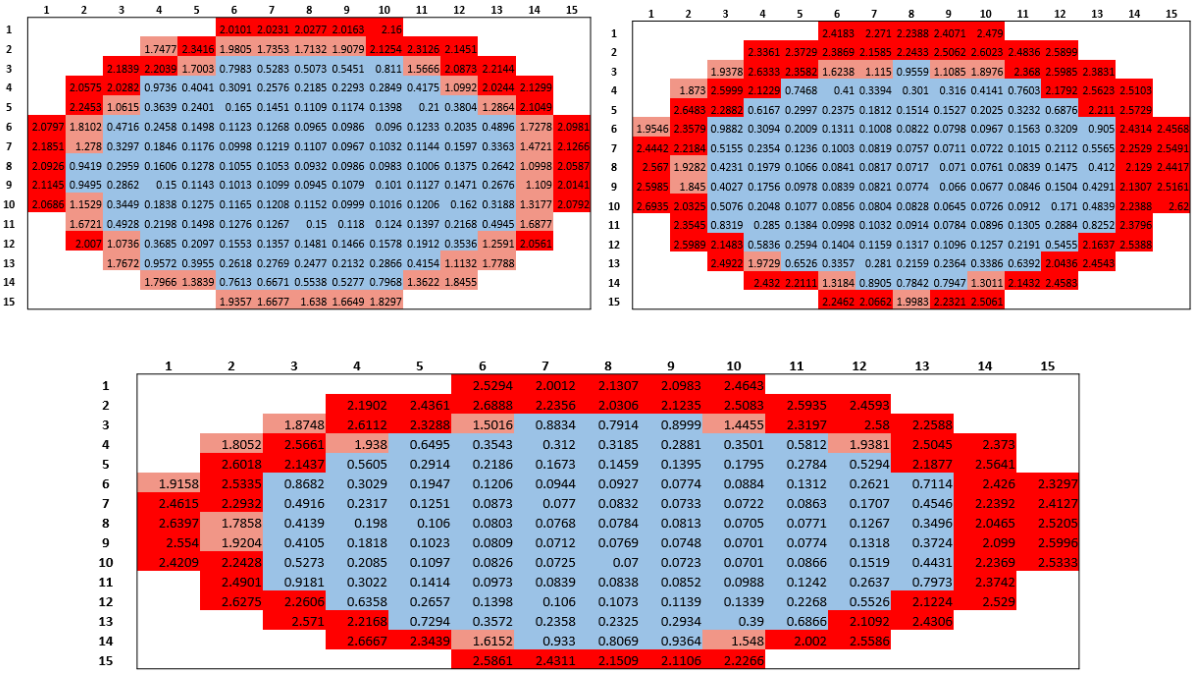

Figure S43 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

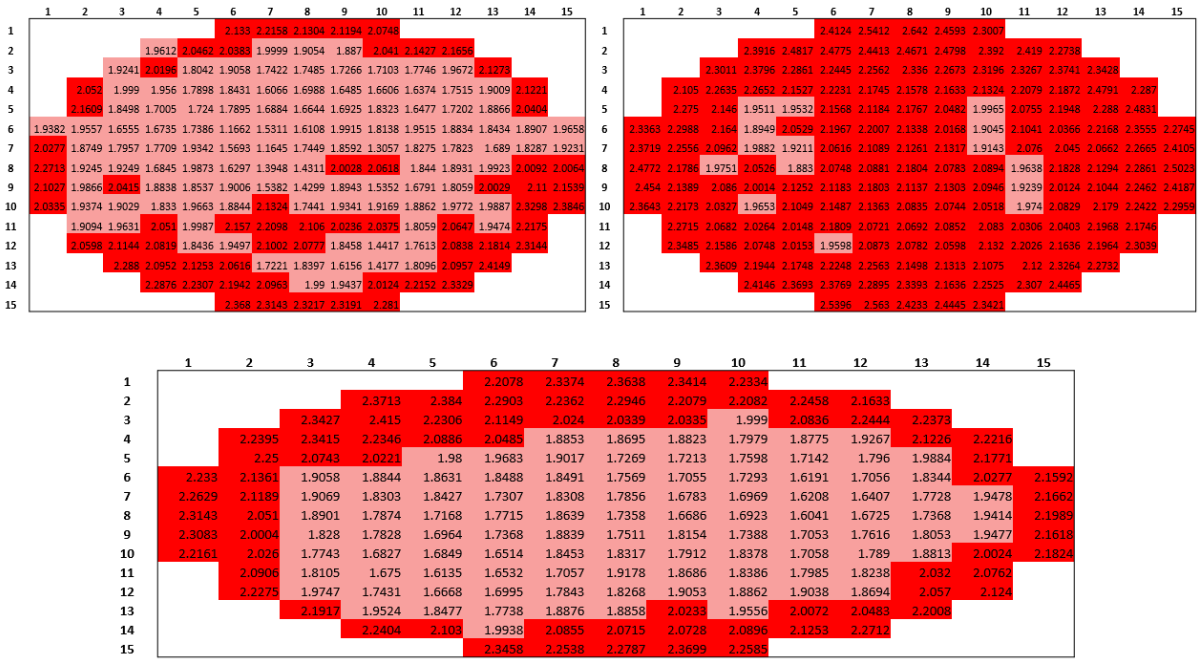

Figure S44 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2HPO_4 (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

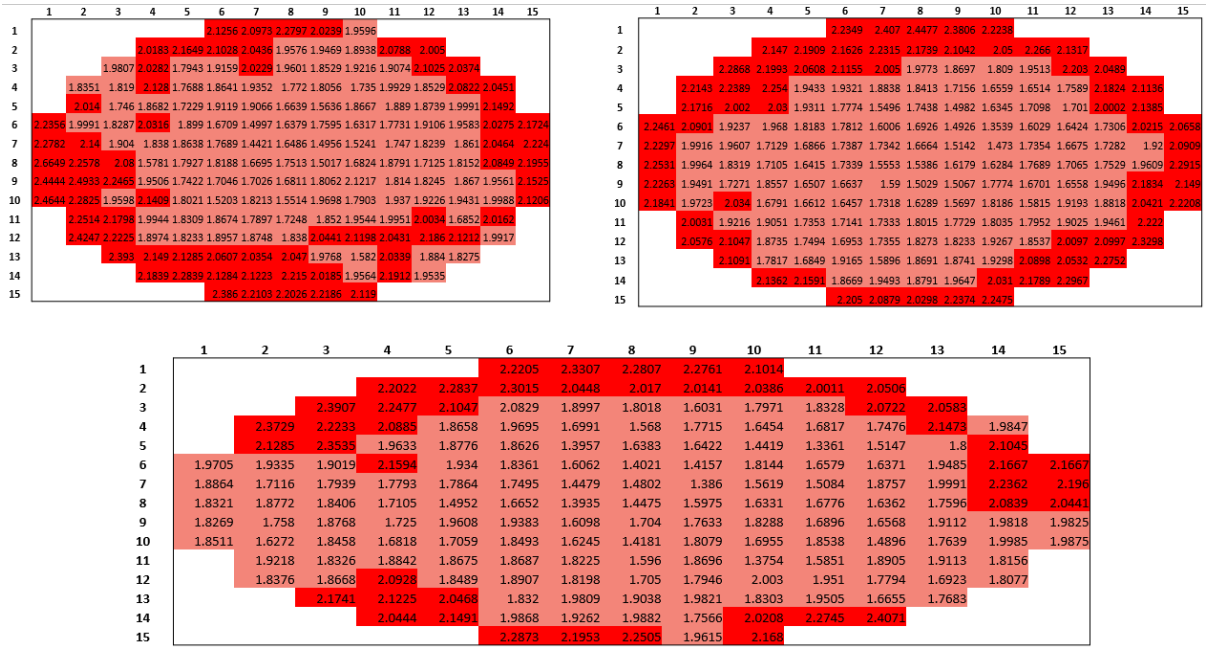

Figure S45 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

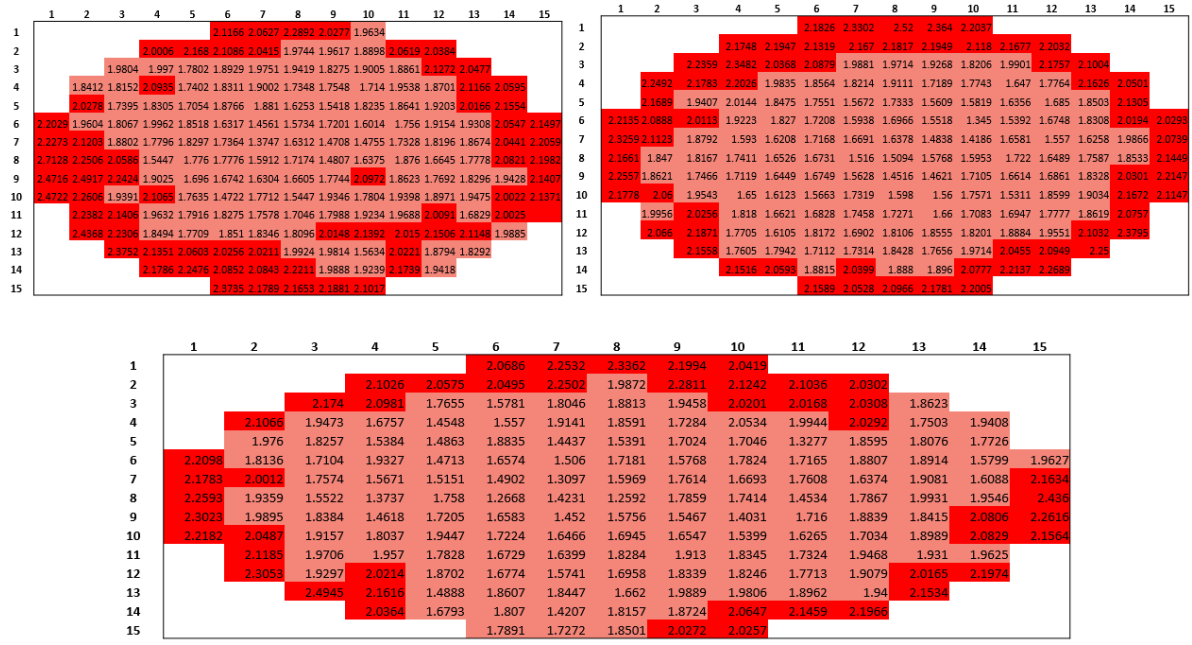

Figure S46 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

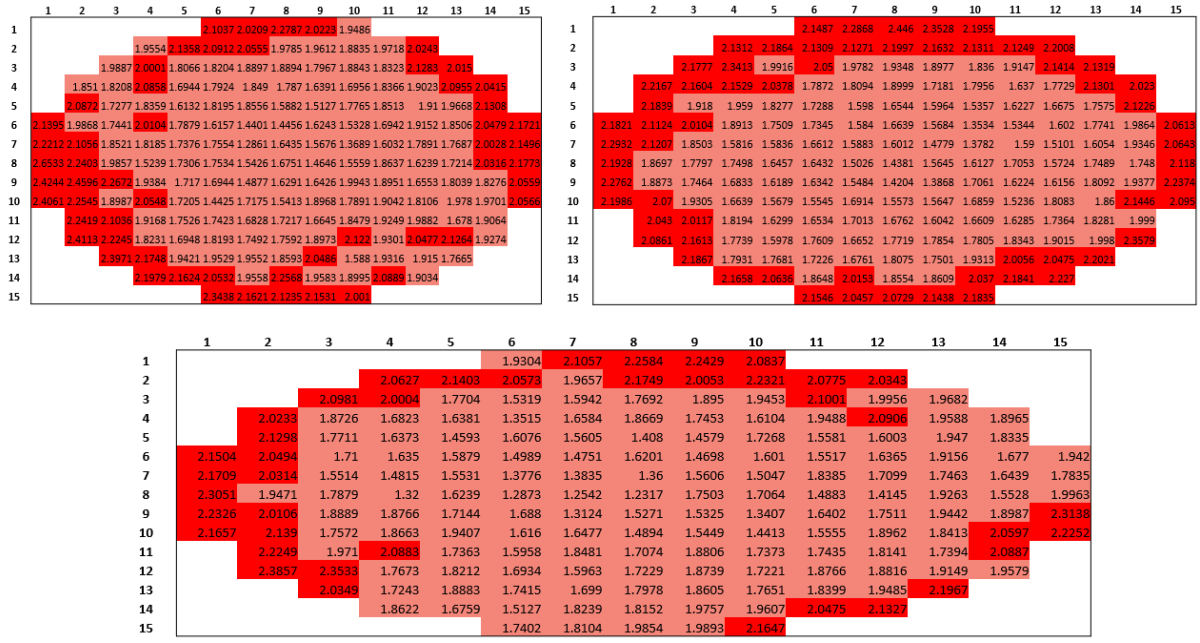

Figure S47 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

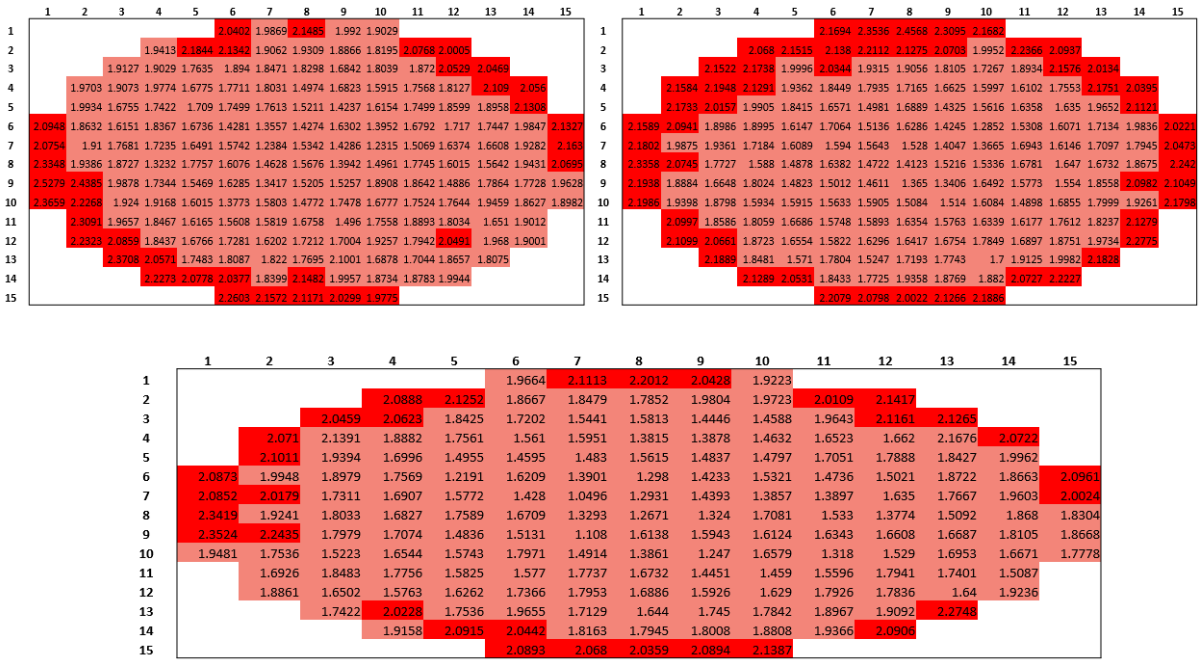

Figure S48 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

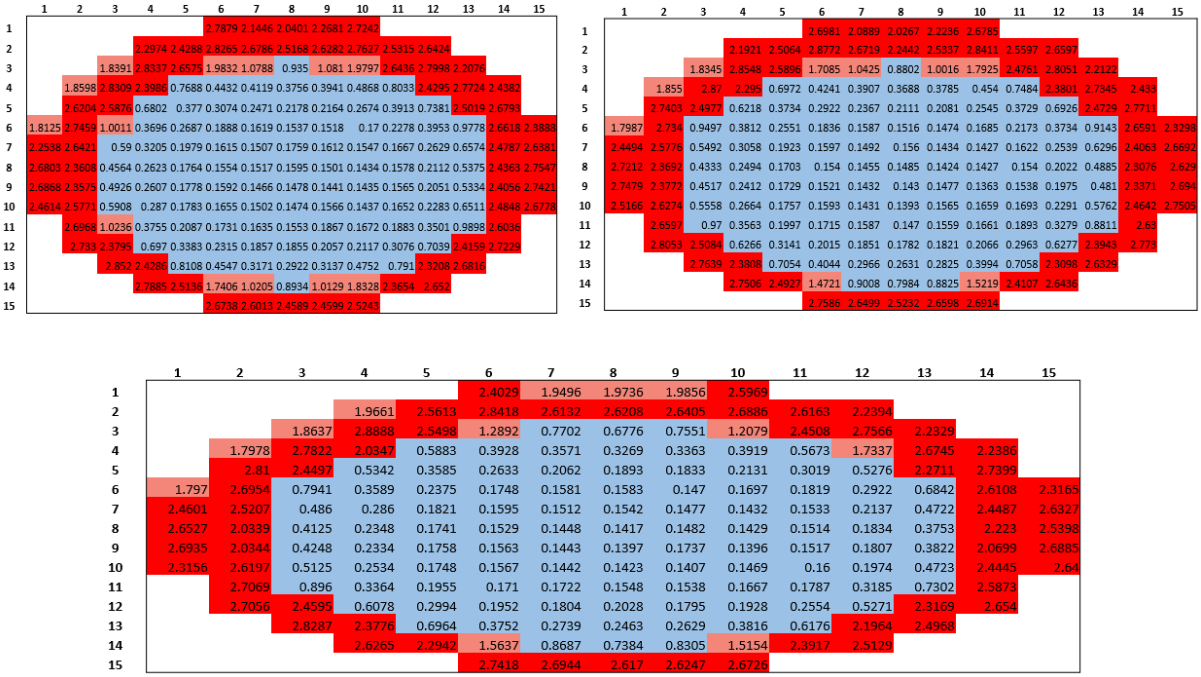

Figure S49 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaH_2PO_4 (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

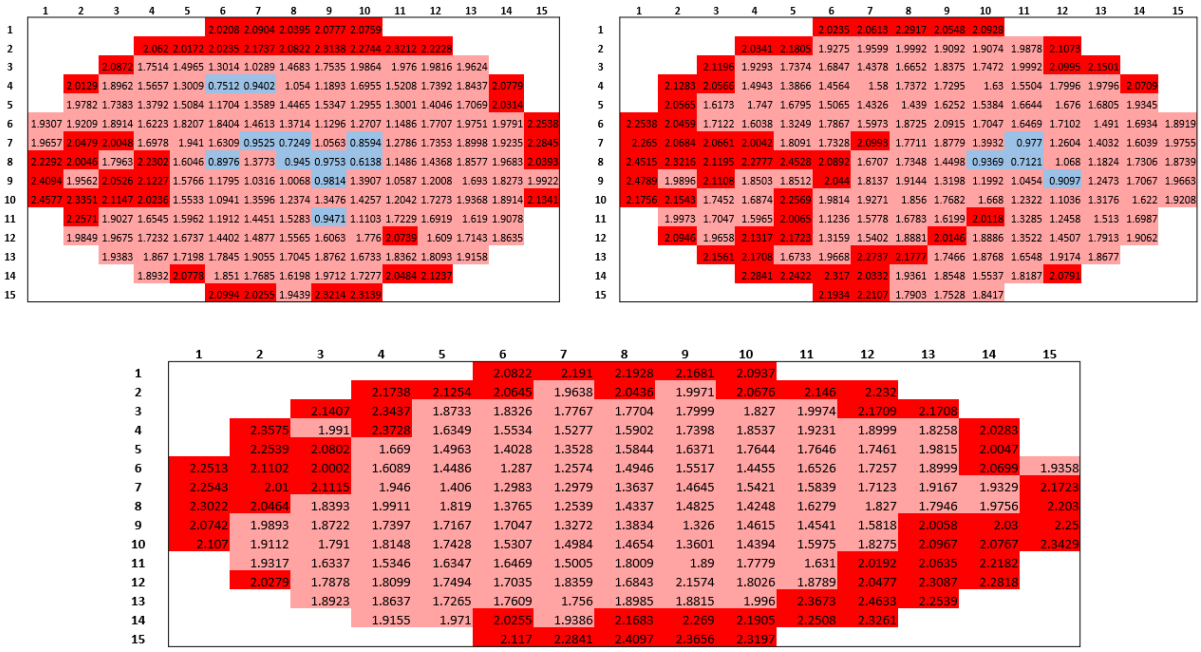

Figure S50 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

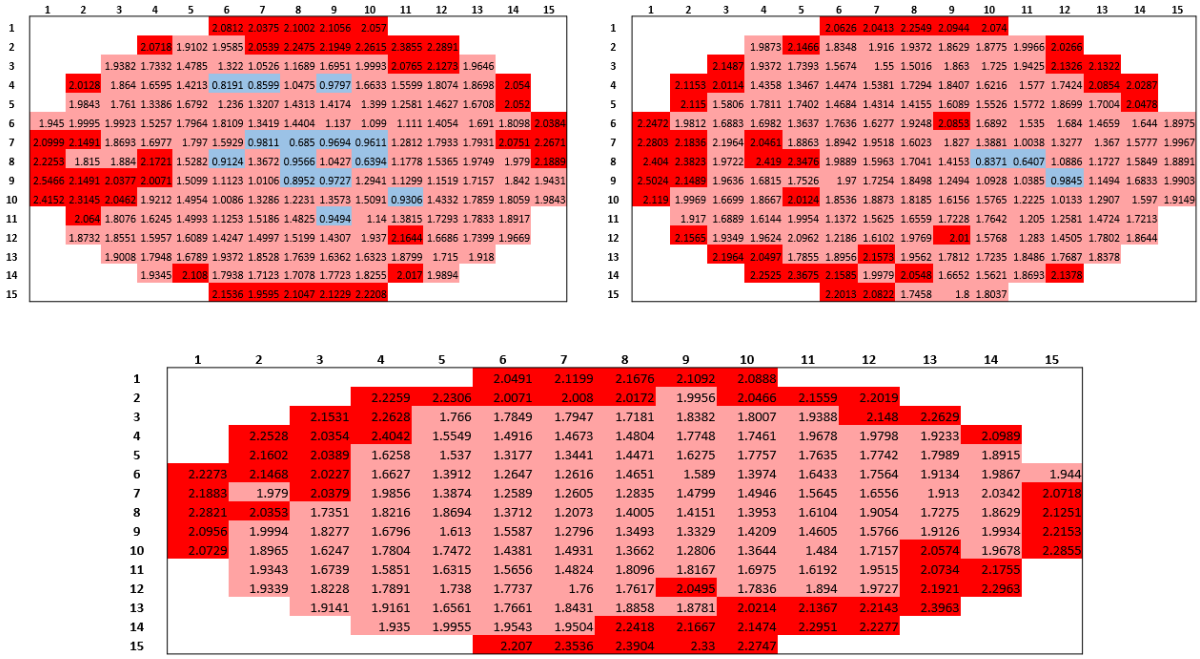

Figure S51 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

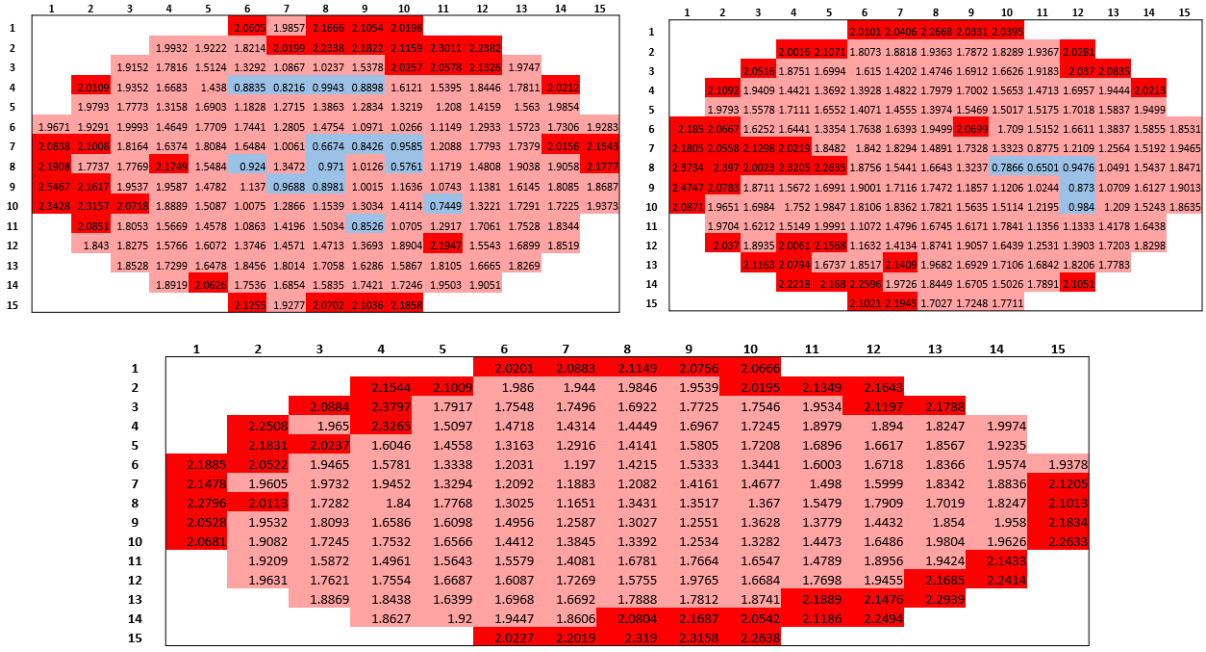

Figure S52 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

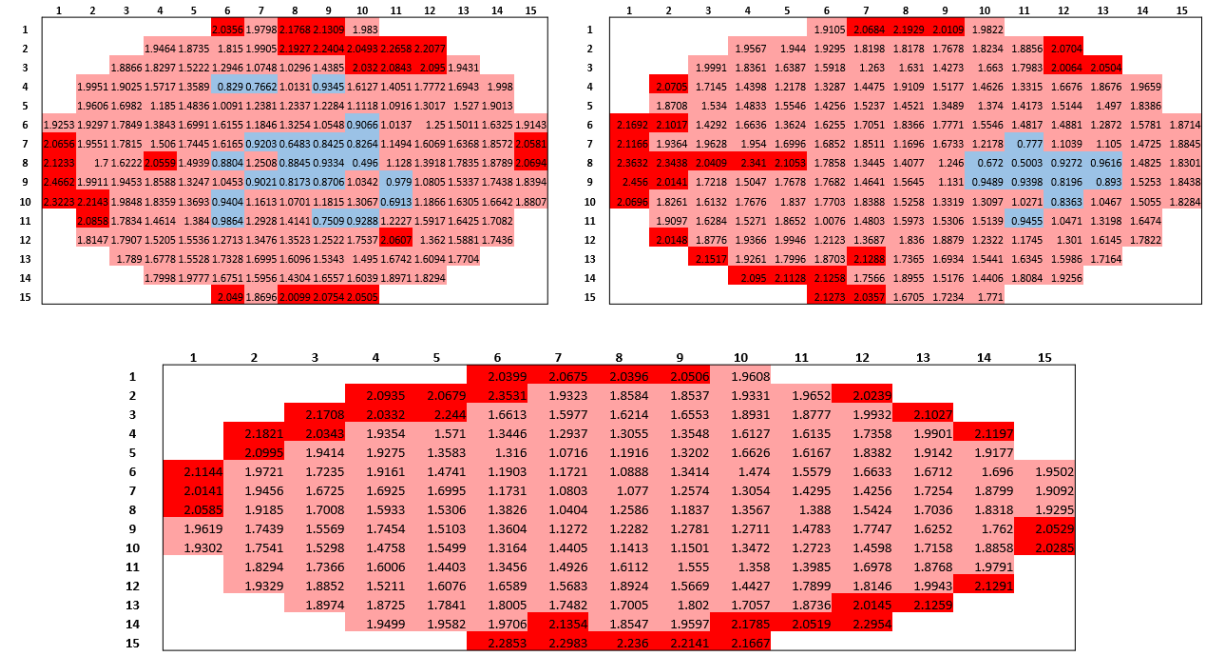

Figure S53 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

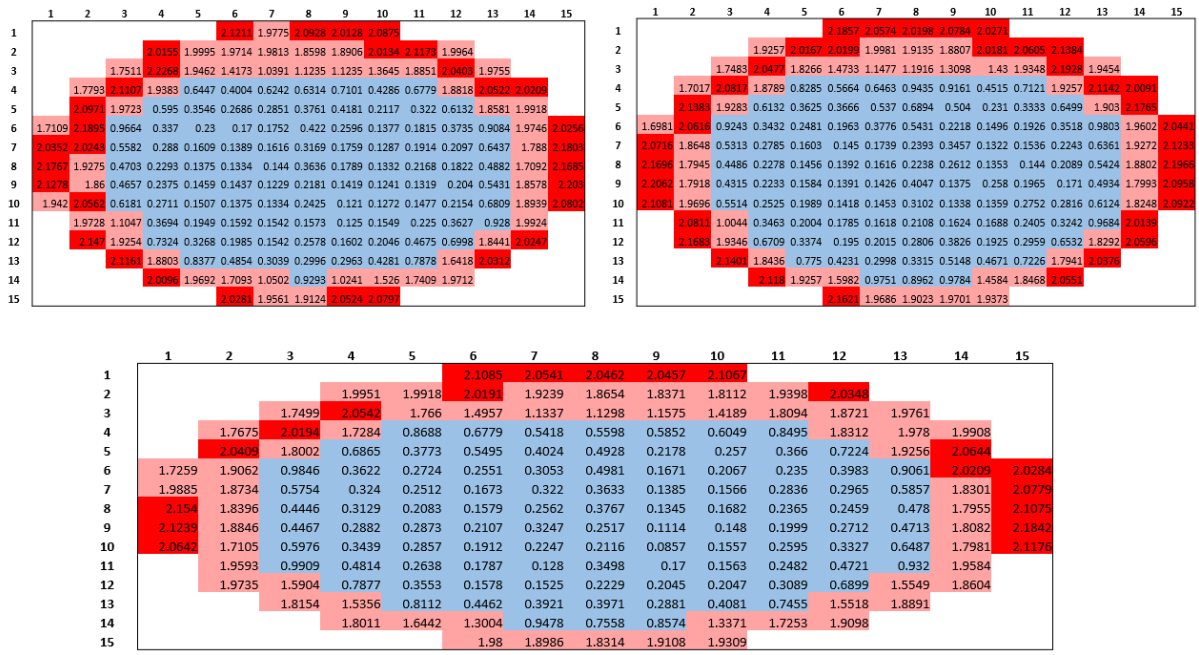

Figure S54 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2CO_3 (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

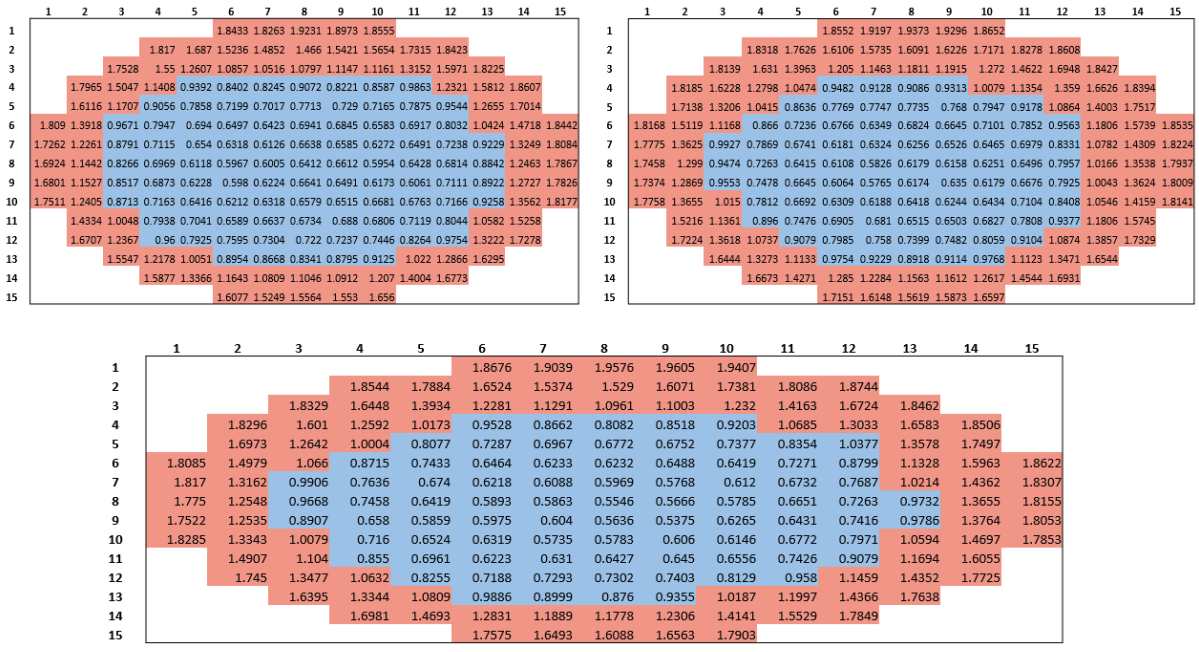

Figure S55 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

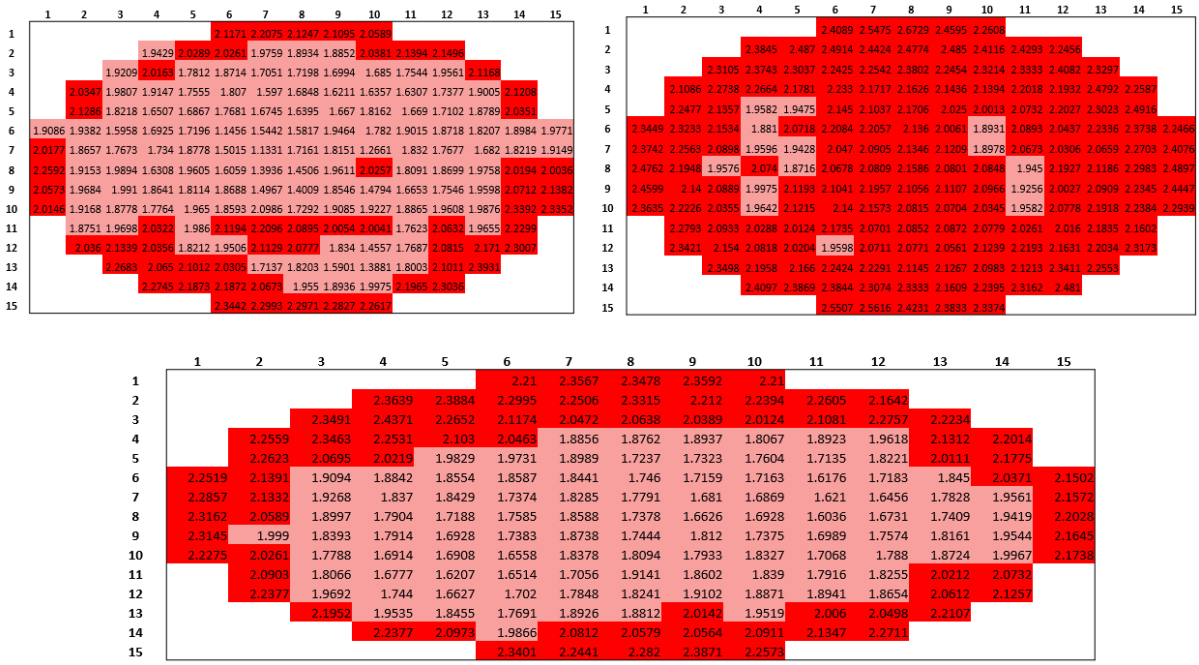

Figure S56 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

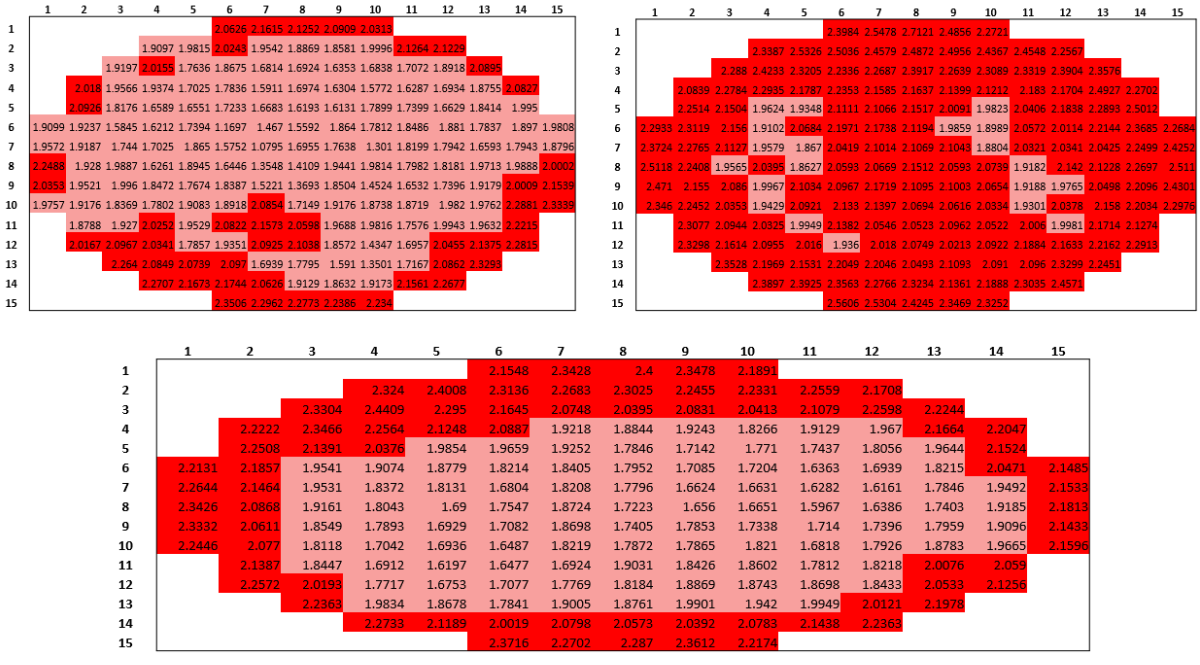

Figure S57 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

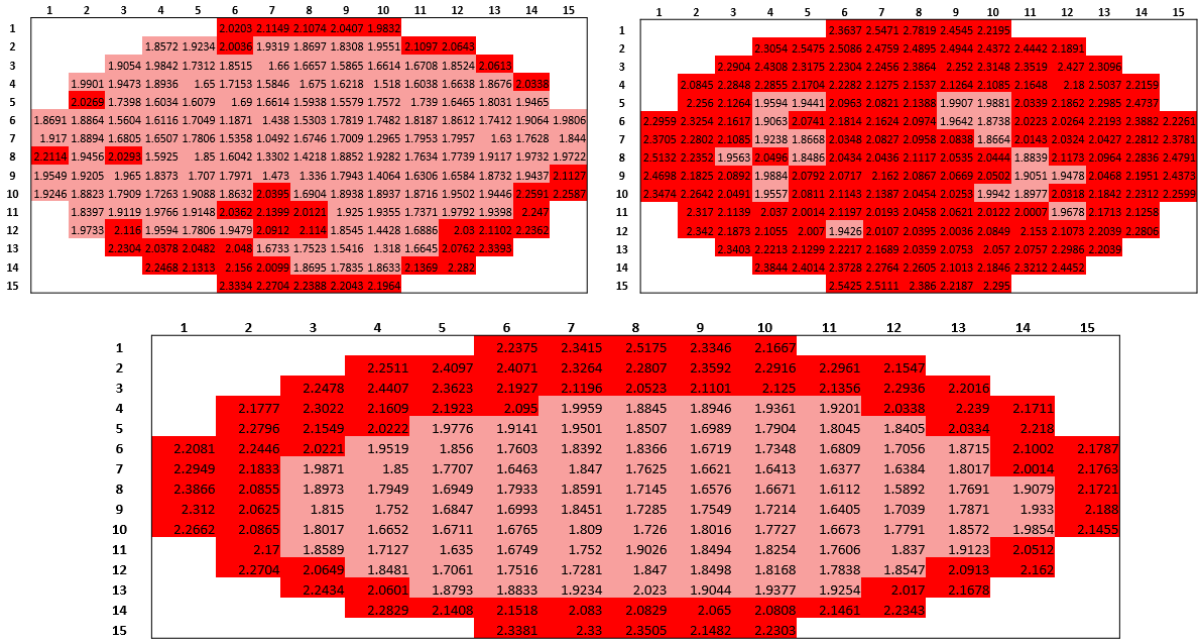

Figure S58 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

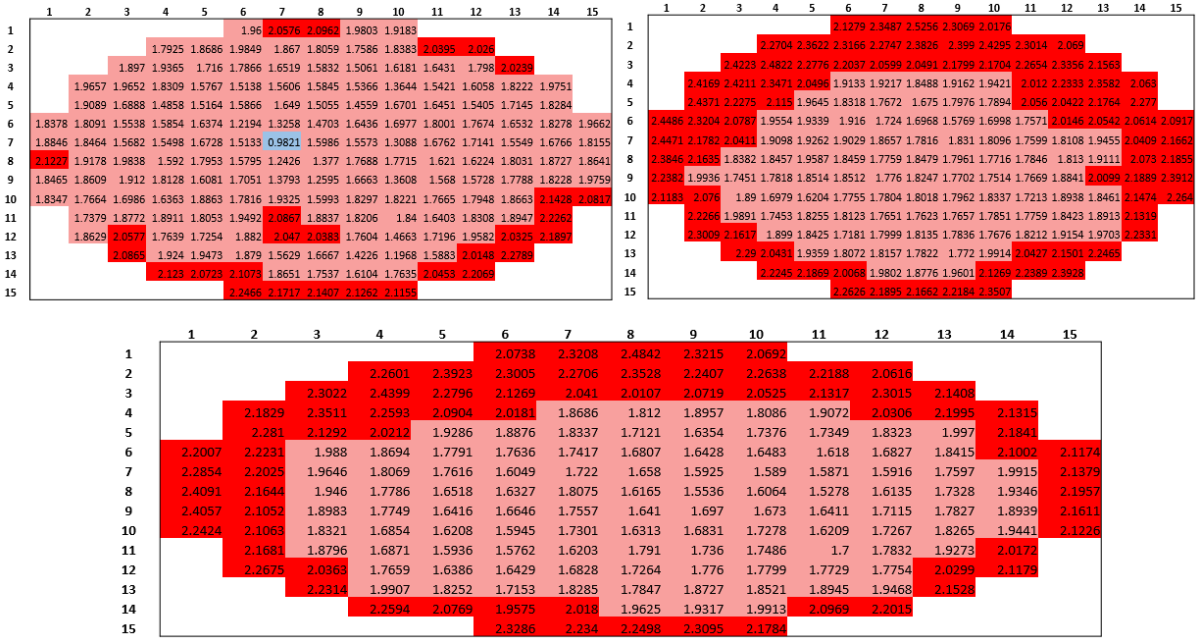

Figure S59 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous Na_2SO_4 (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

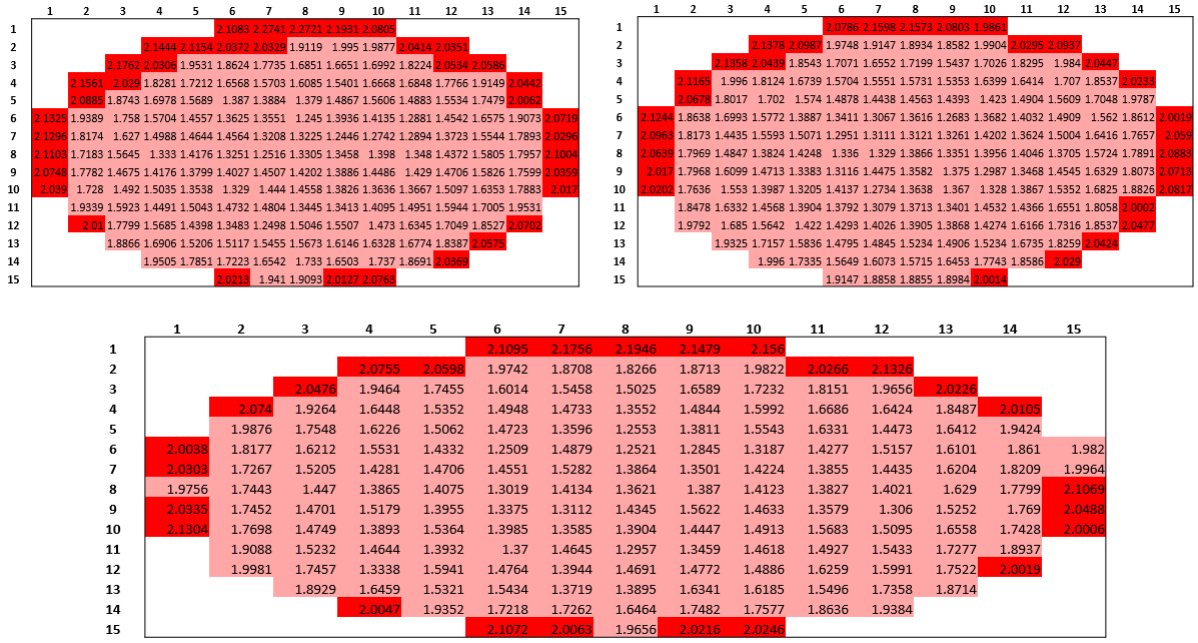

Figure S60 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

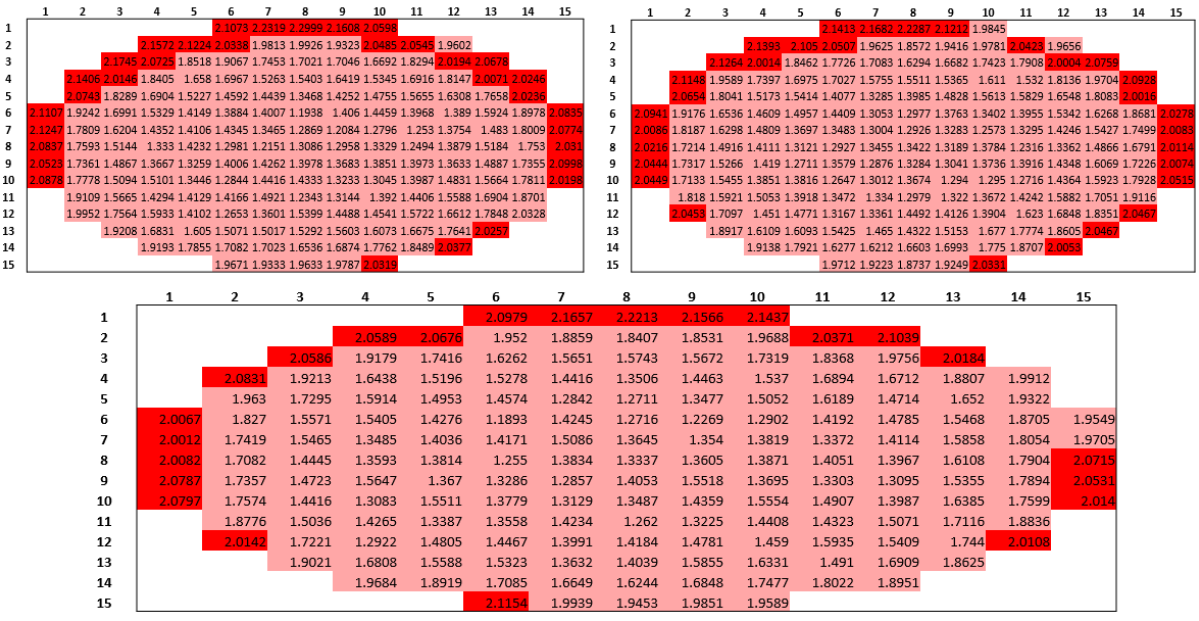

Figure S61 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

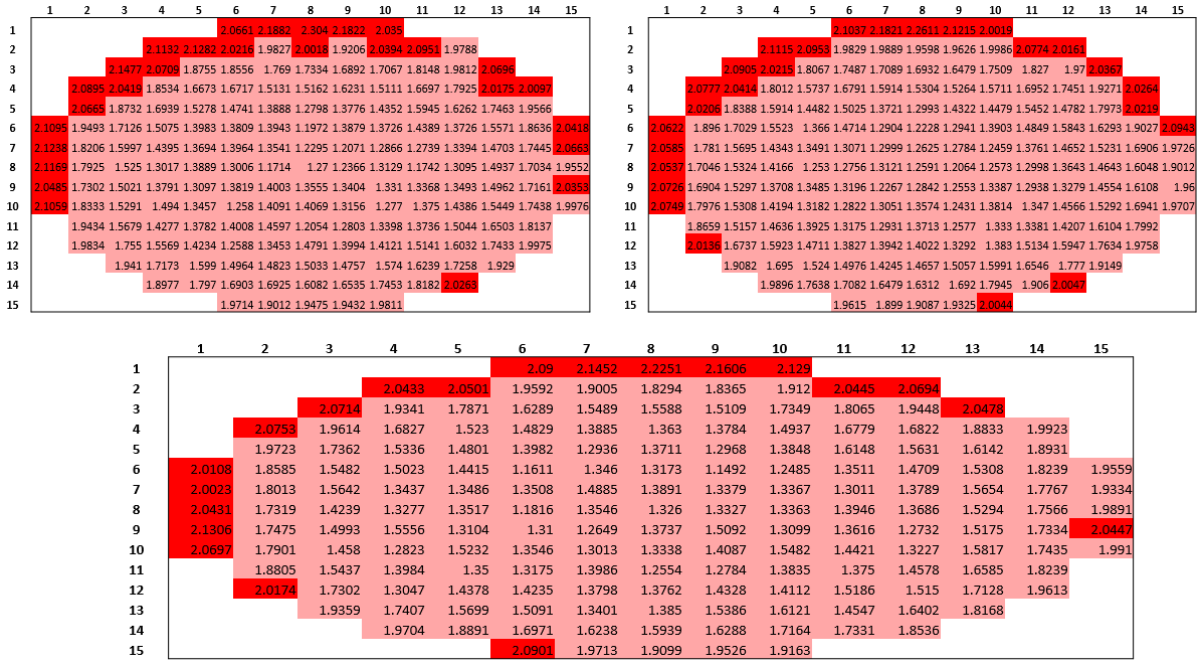

Figure S62 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

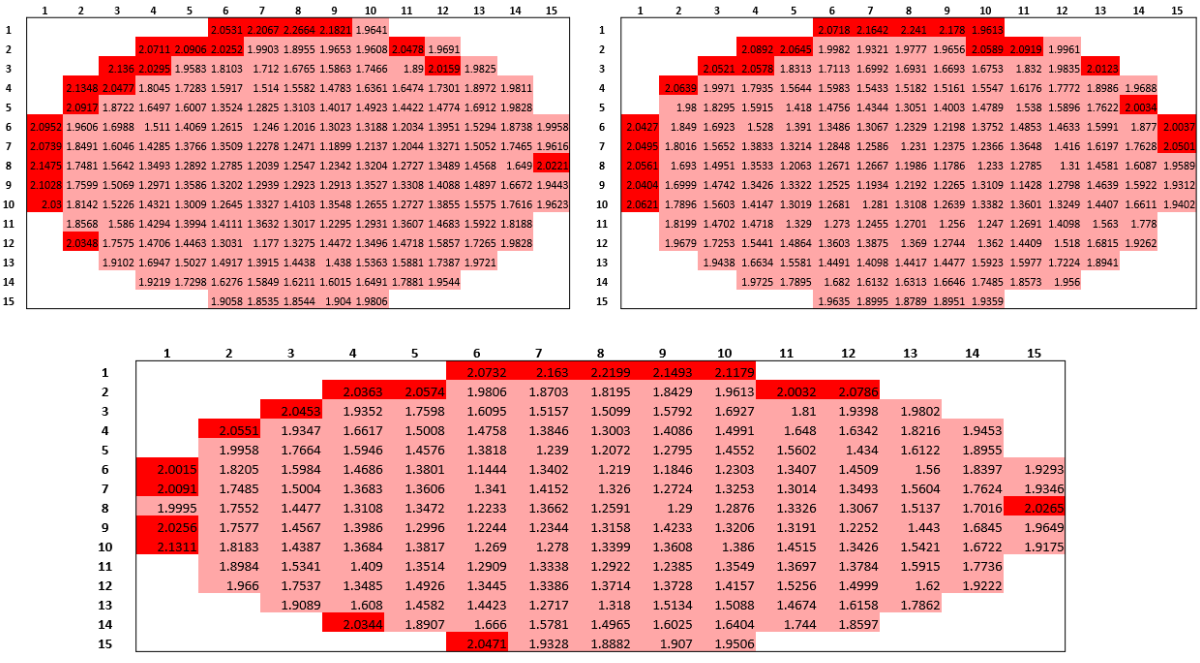

Figure S63 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

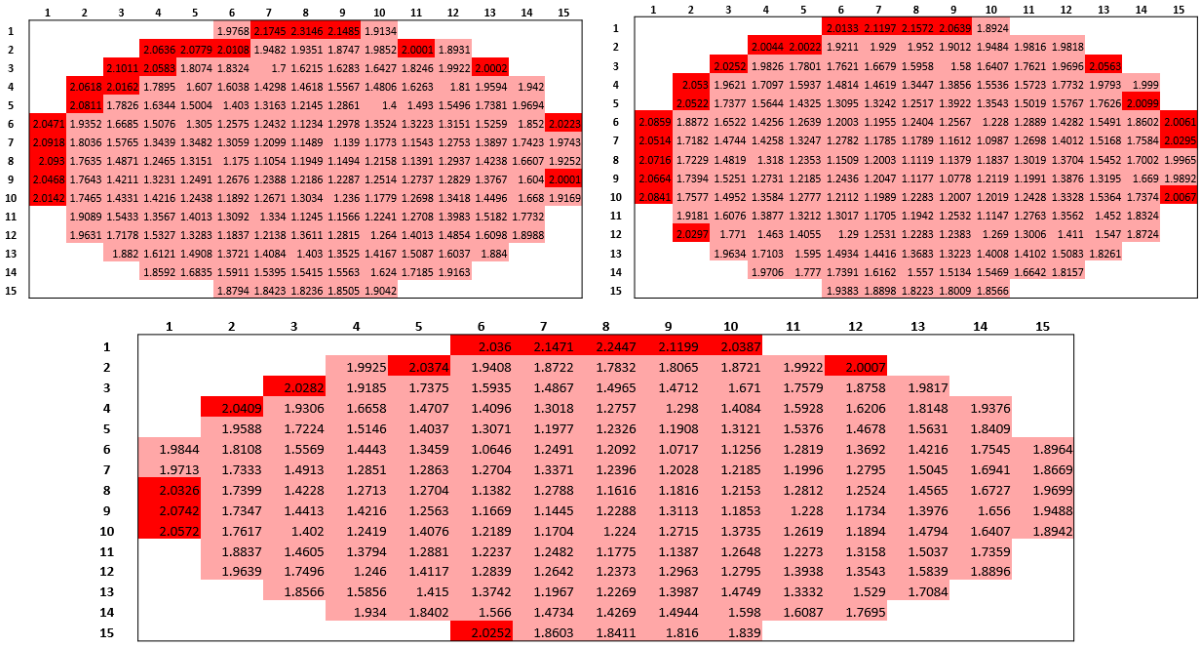

Figure S64 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaHCO_3$ (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

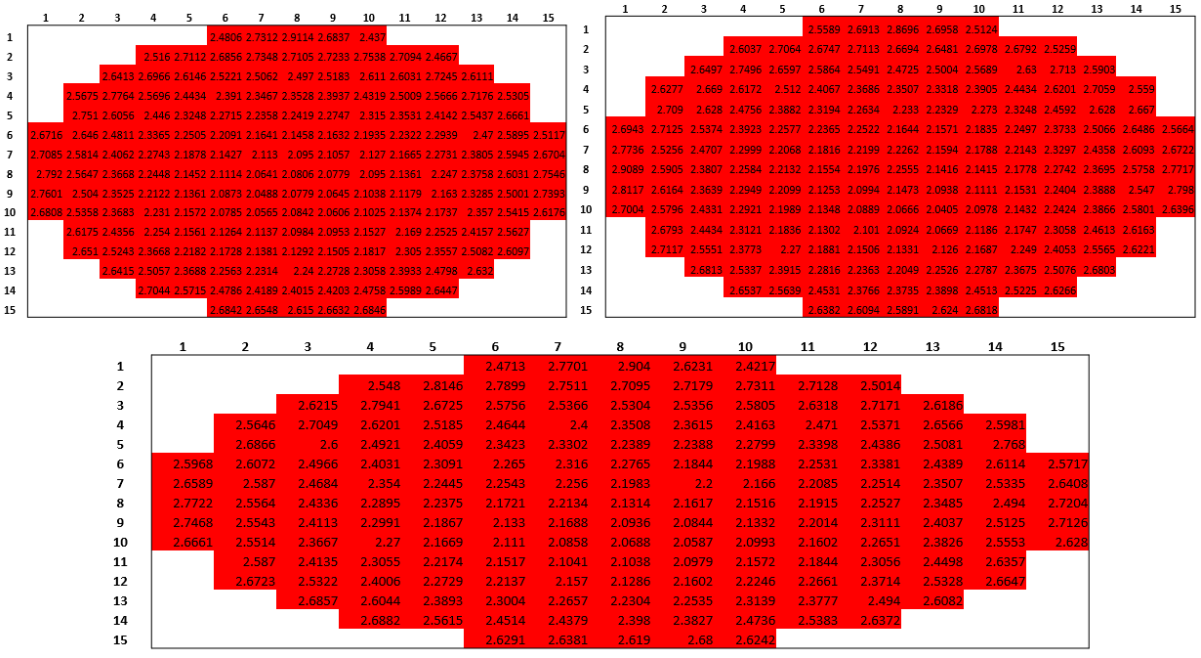

Figure S65 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

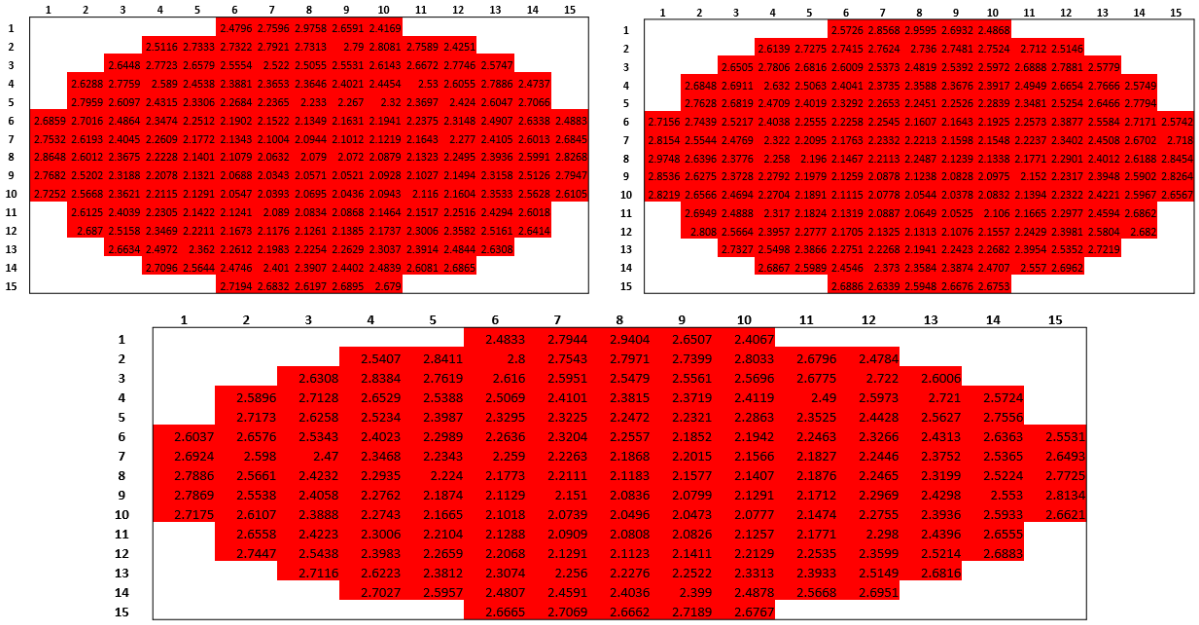

Figure S66 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

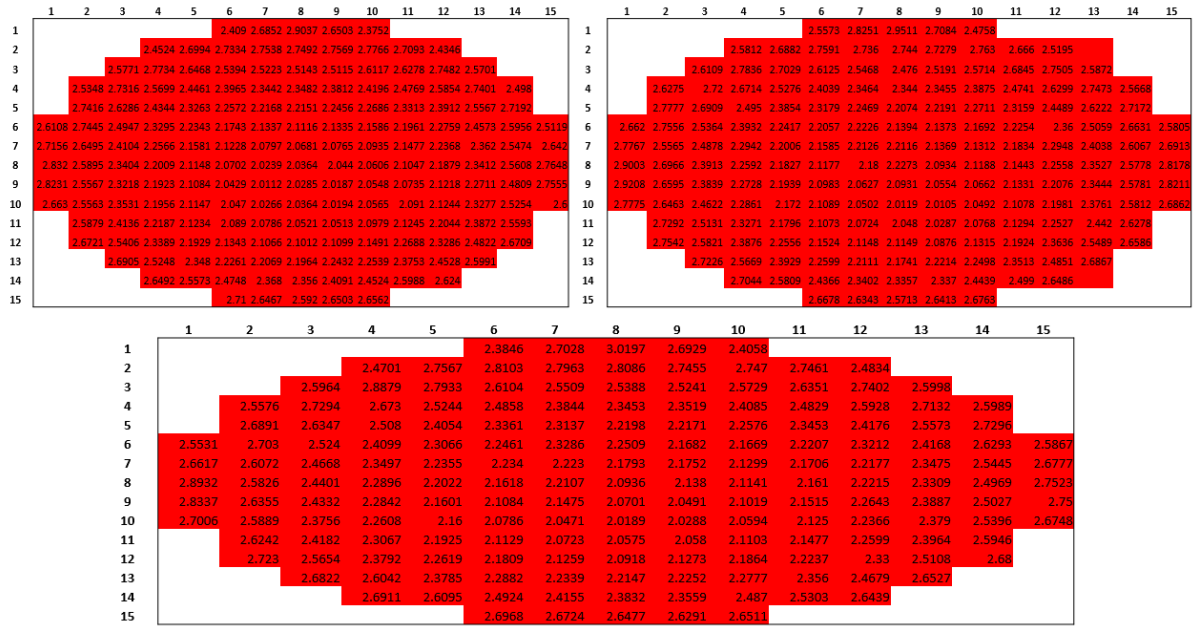

Figure S67 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

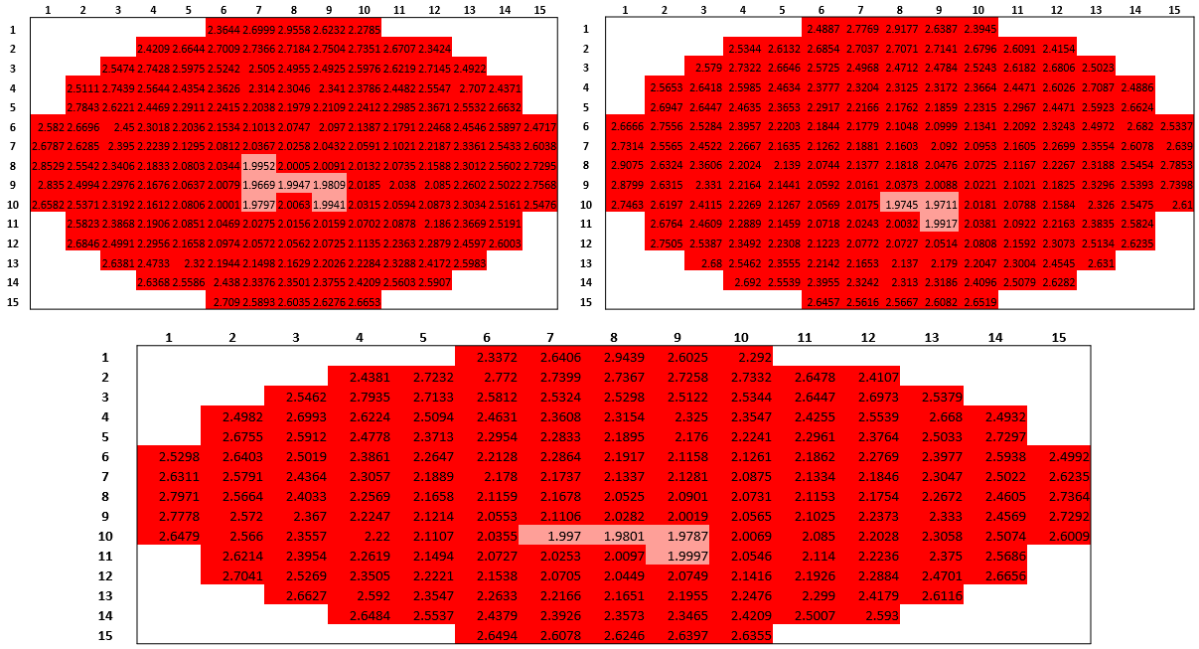

Figure S68 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

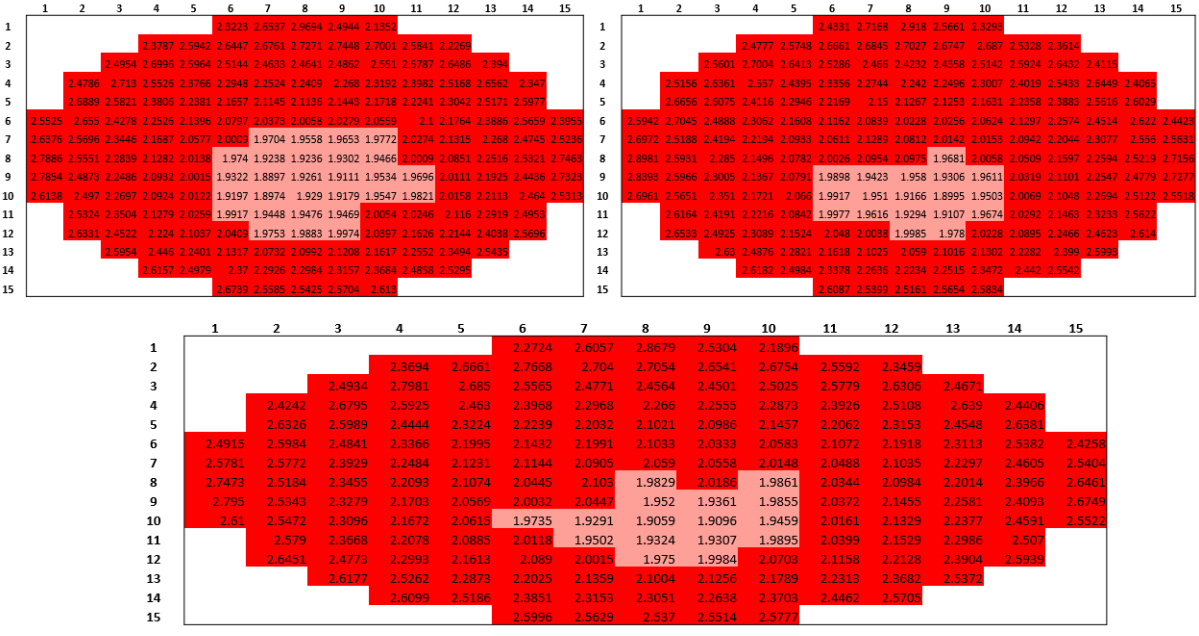

Figure S69 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOAc (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

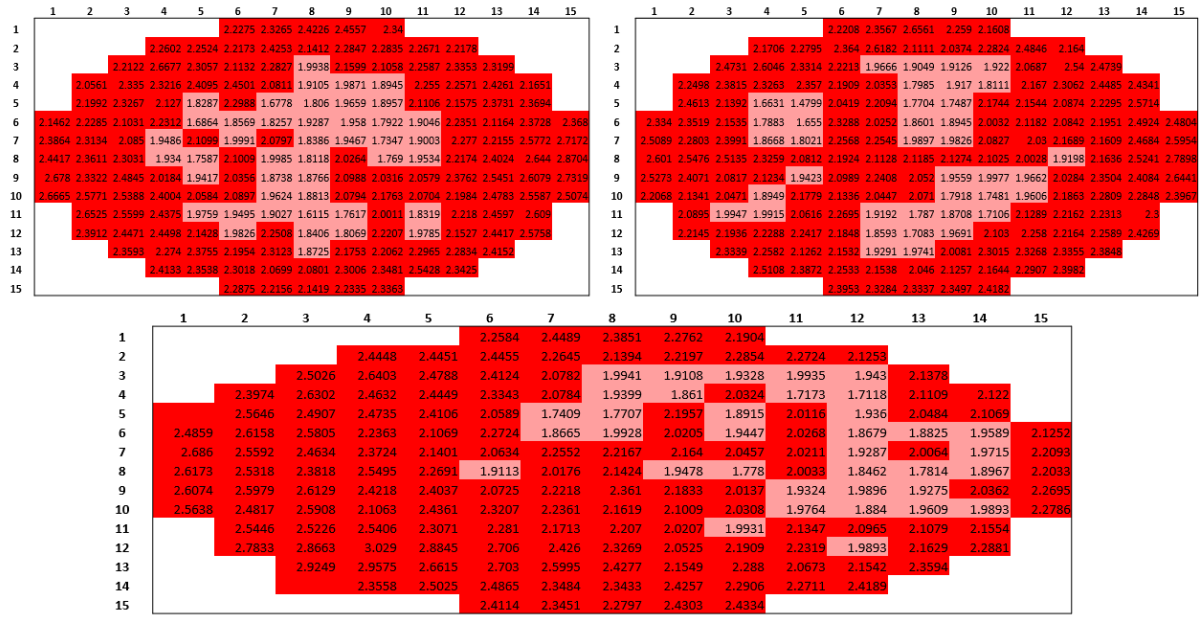

Figure S70 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaF (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

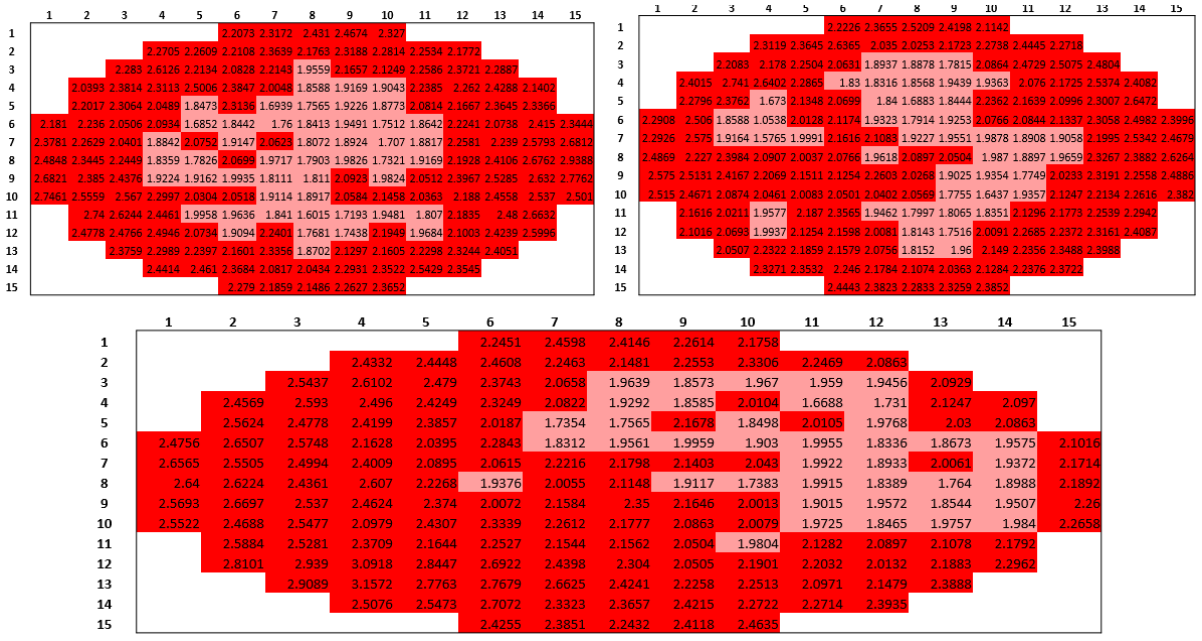

Figure S71 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaF (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

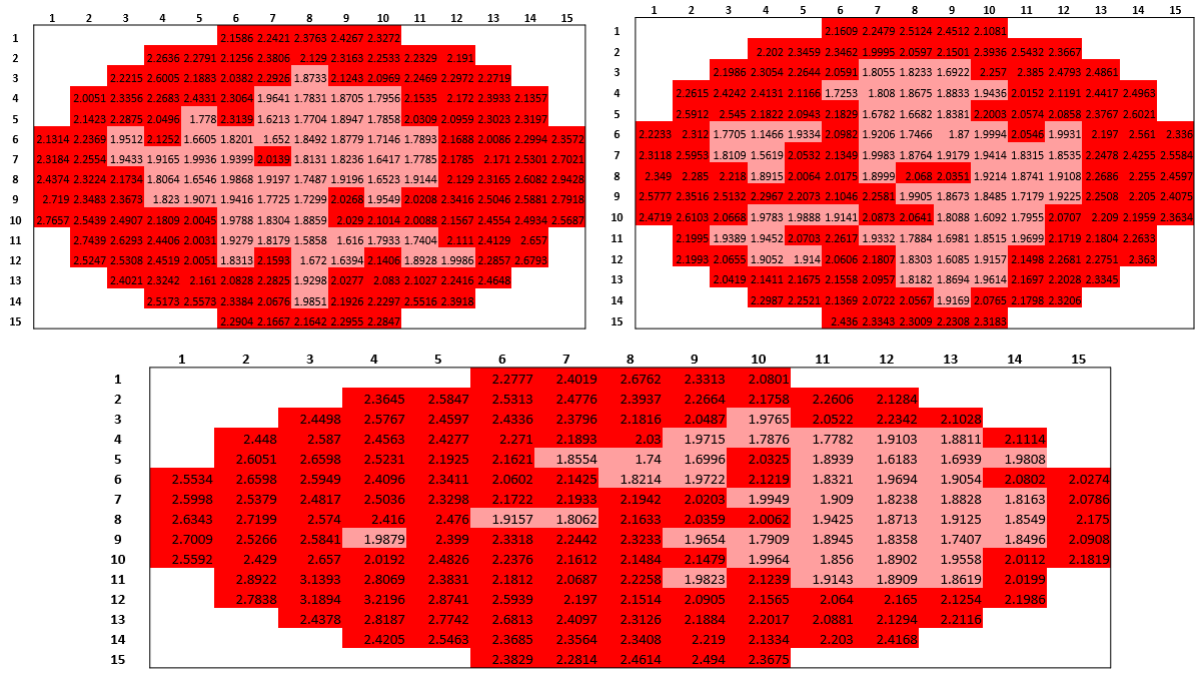

Figure S72 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaF (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

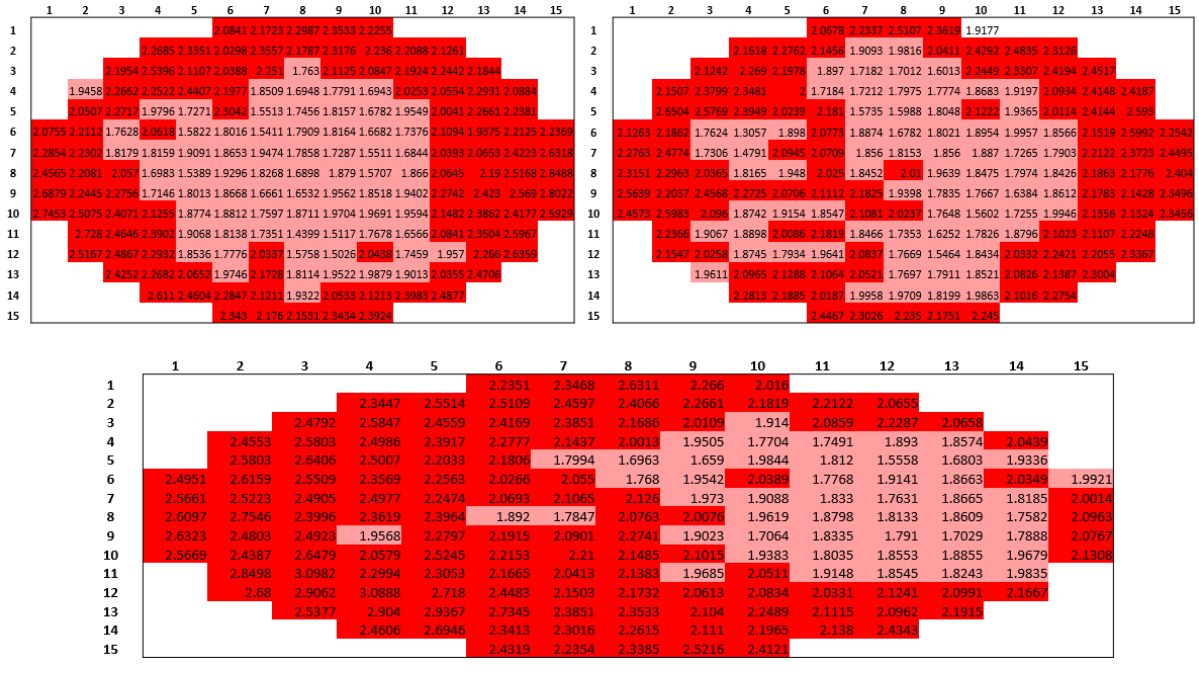

Figure S73 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaF (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

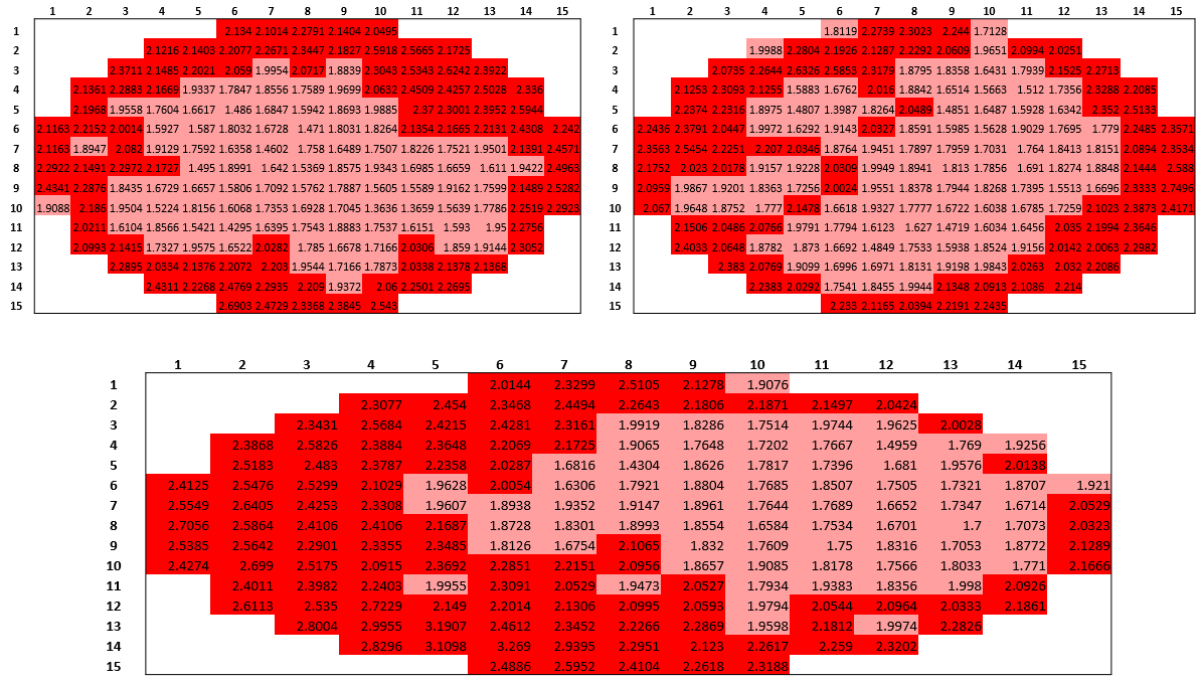

Figure S74 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaF (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

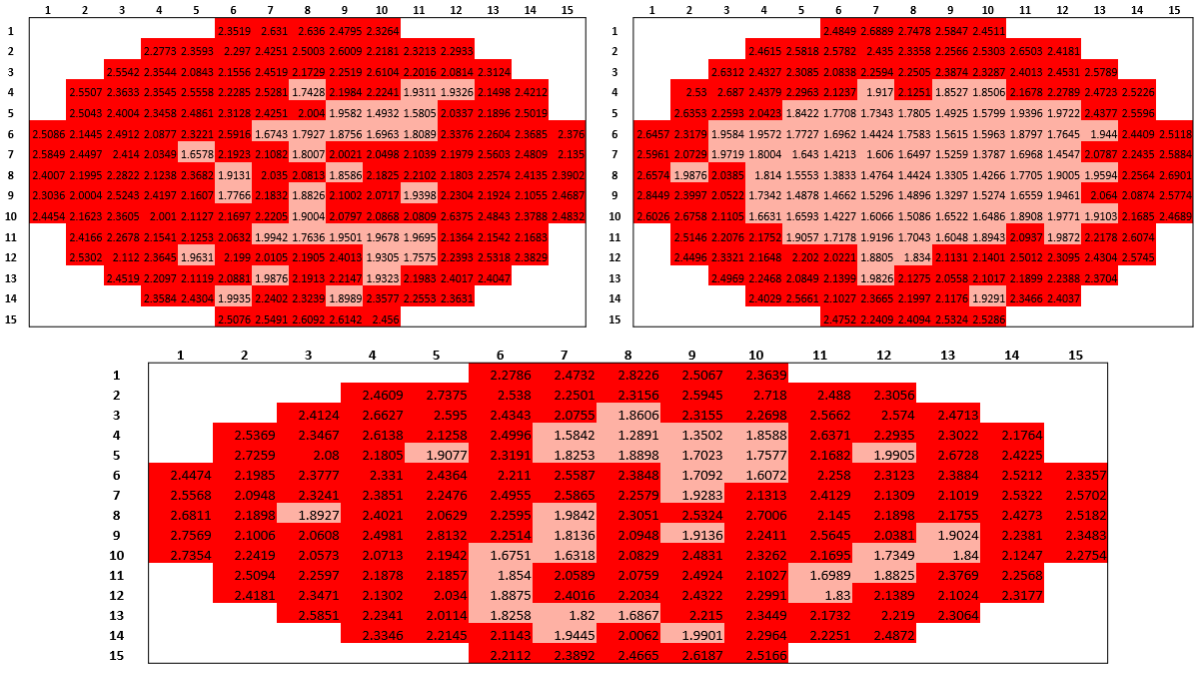

Figure S75 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous RbCl (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

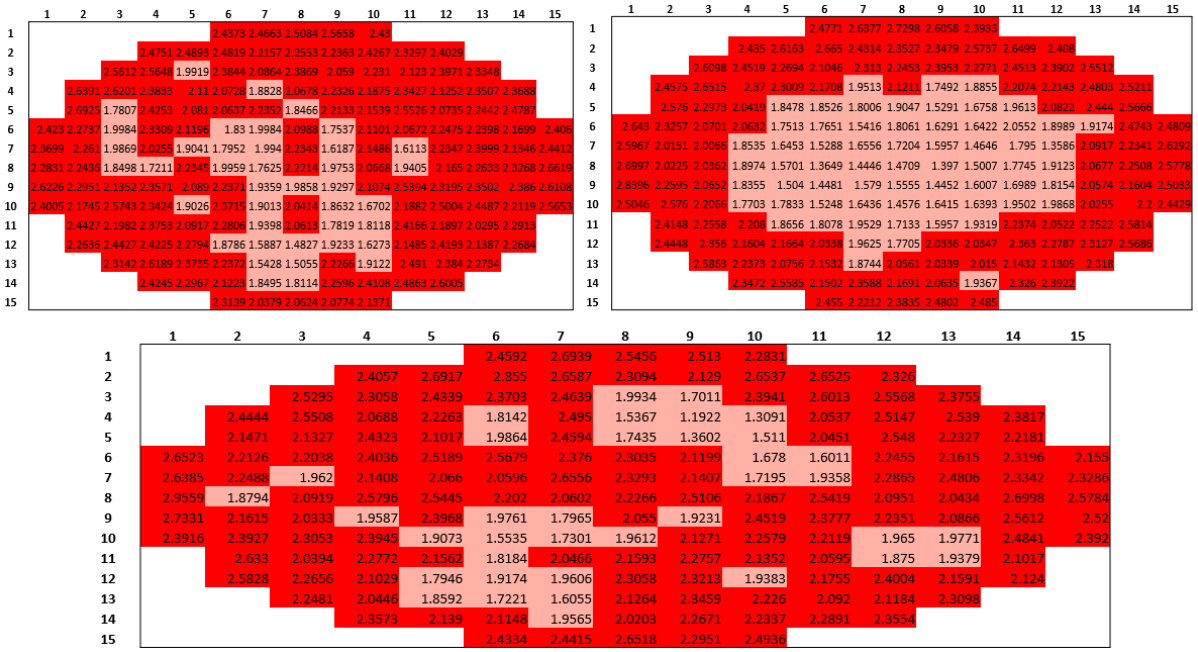

Figure S76 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous RbCl (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

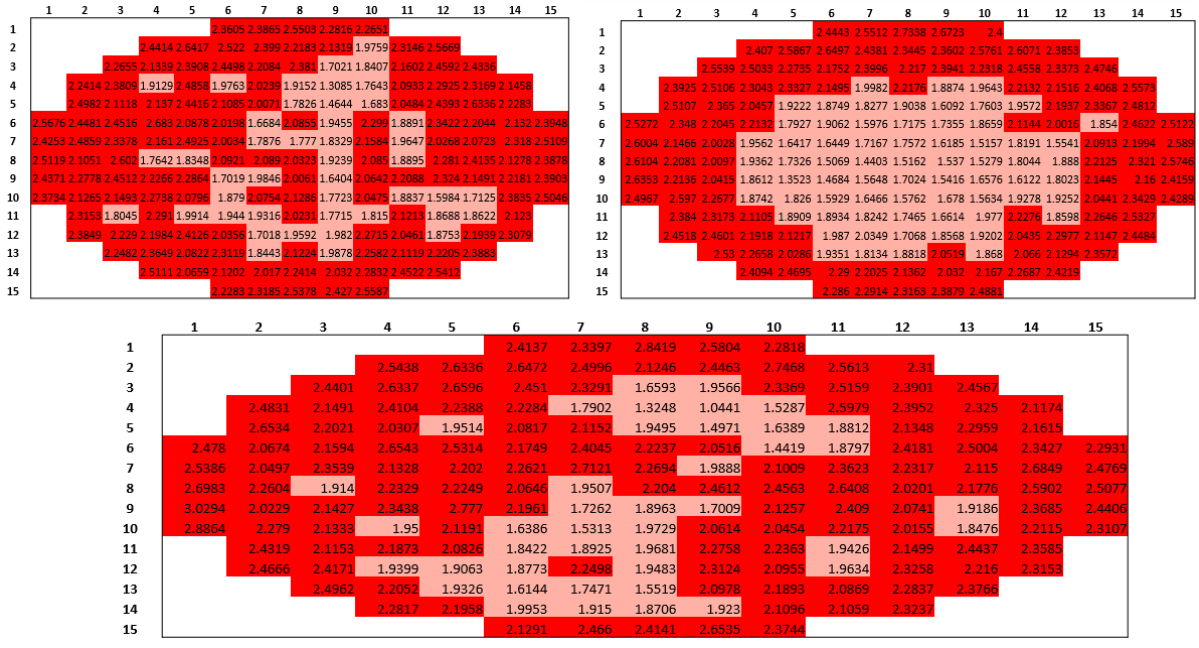

Figure S77 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous RbCl (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

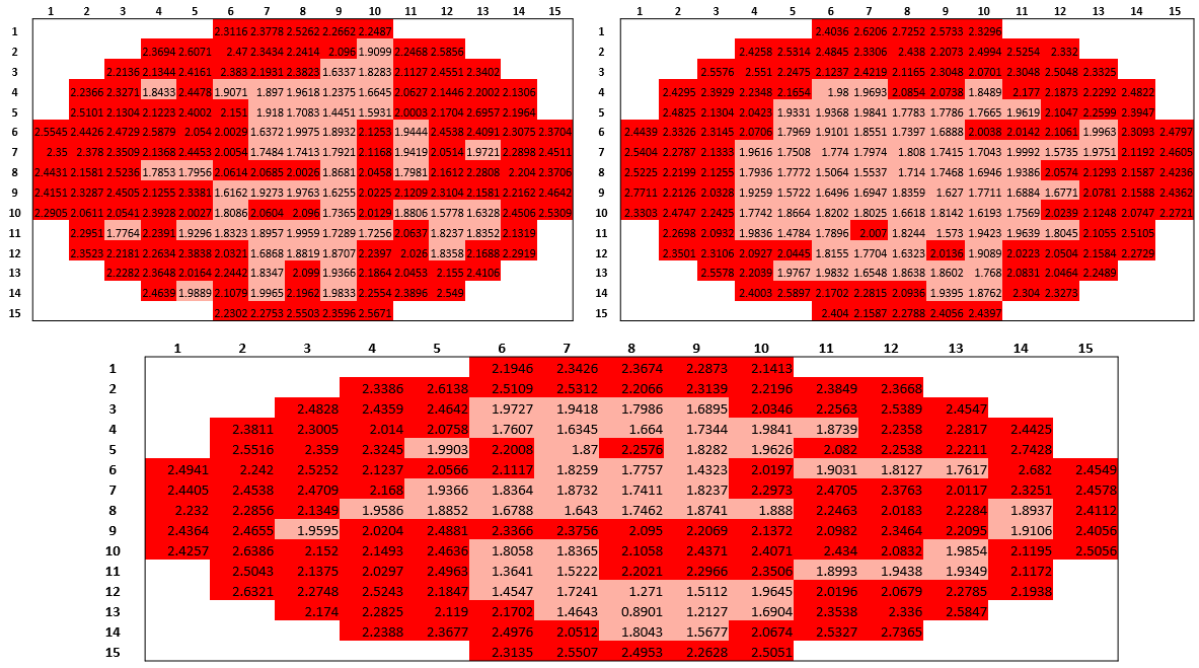

Figure S78 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous RbCl (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

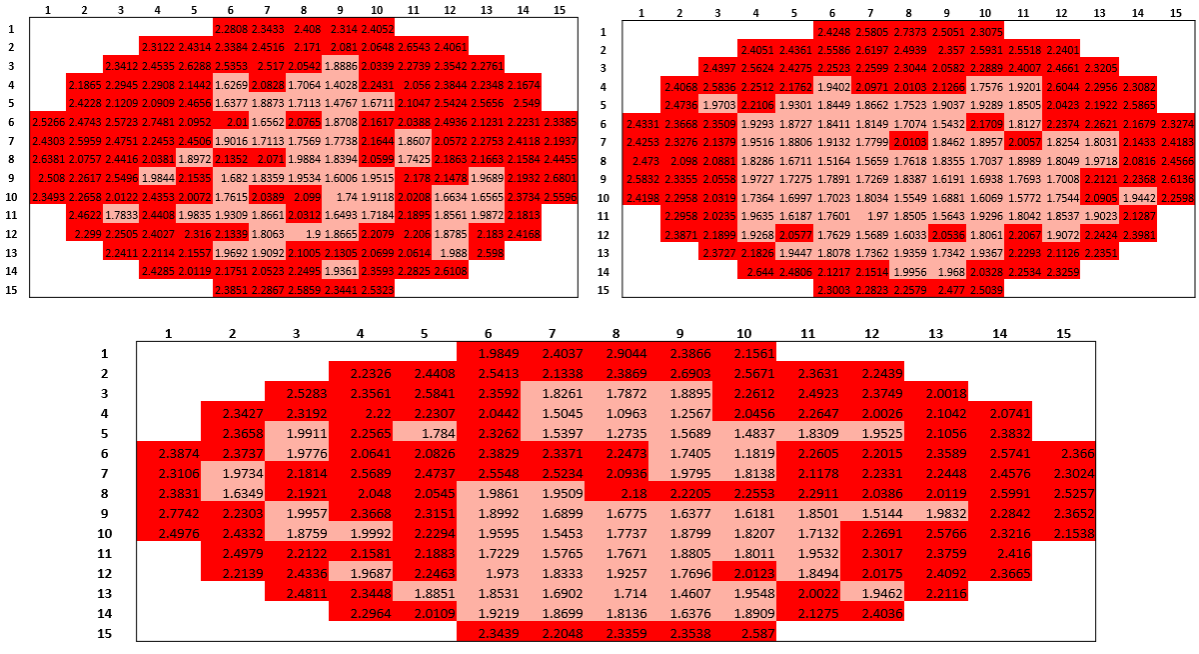

Figure S79 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous RbCl (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

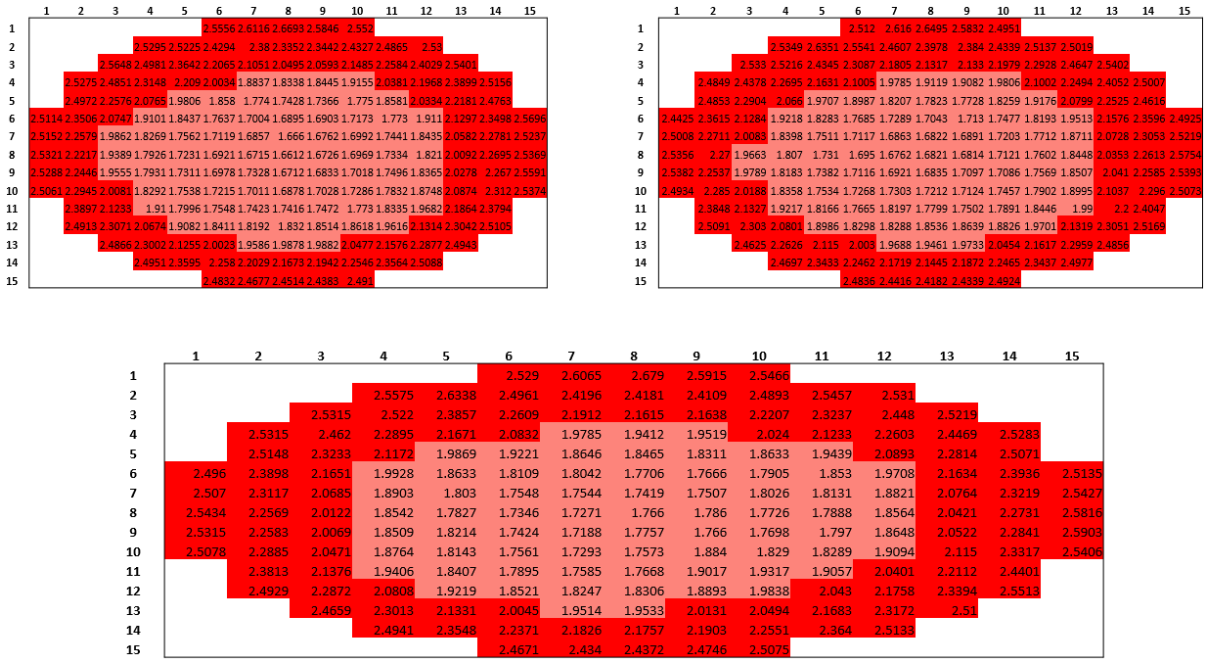

Figure S80 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaCl (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

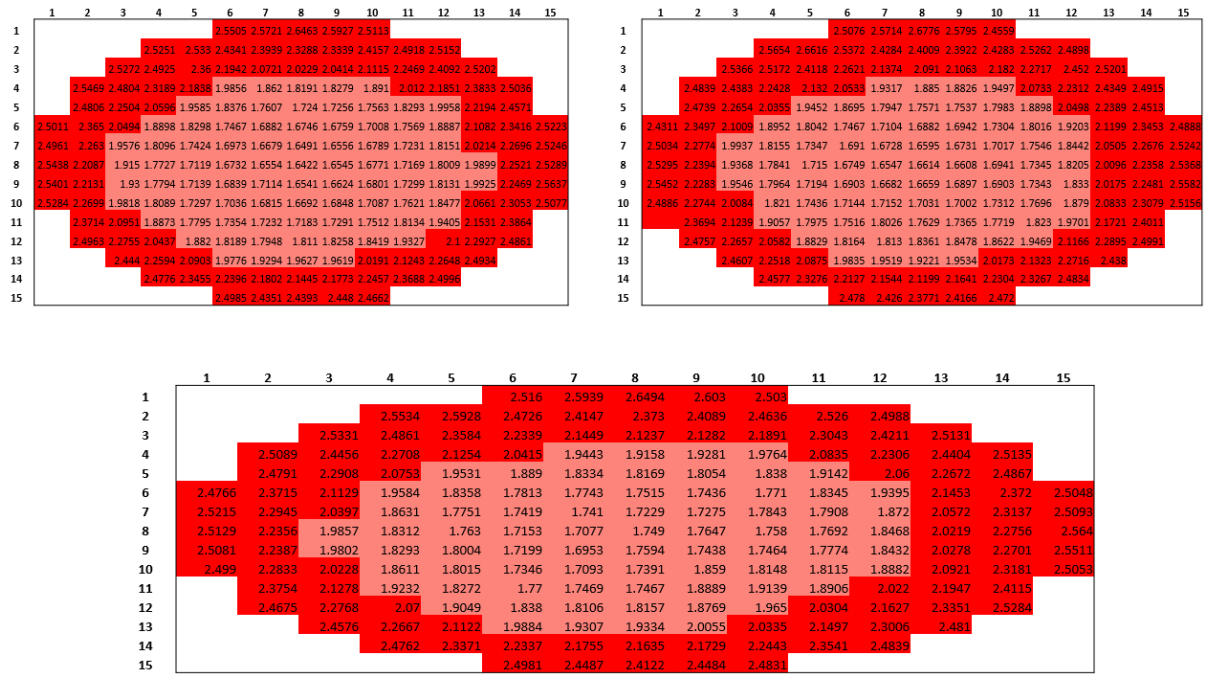

Figure S81 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaCl (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

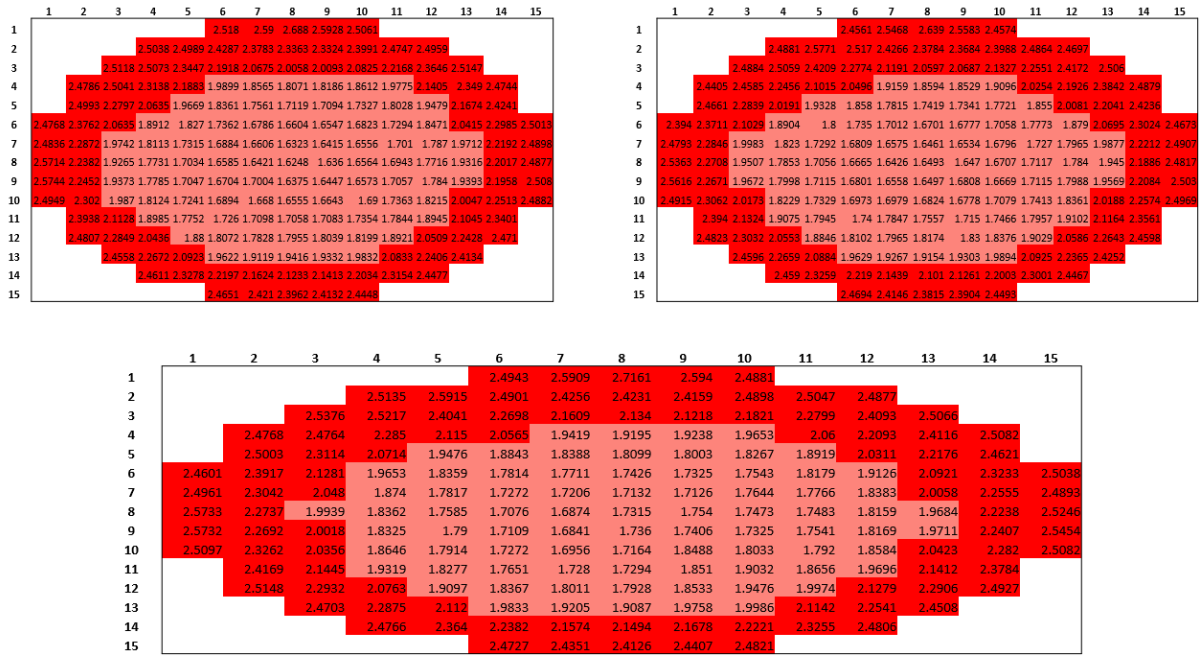

Figure S82 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaCl (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

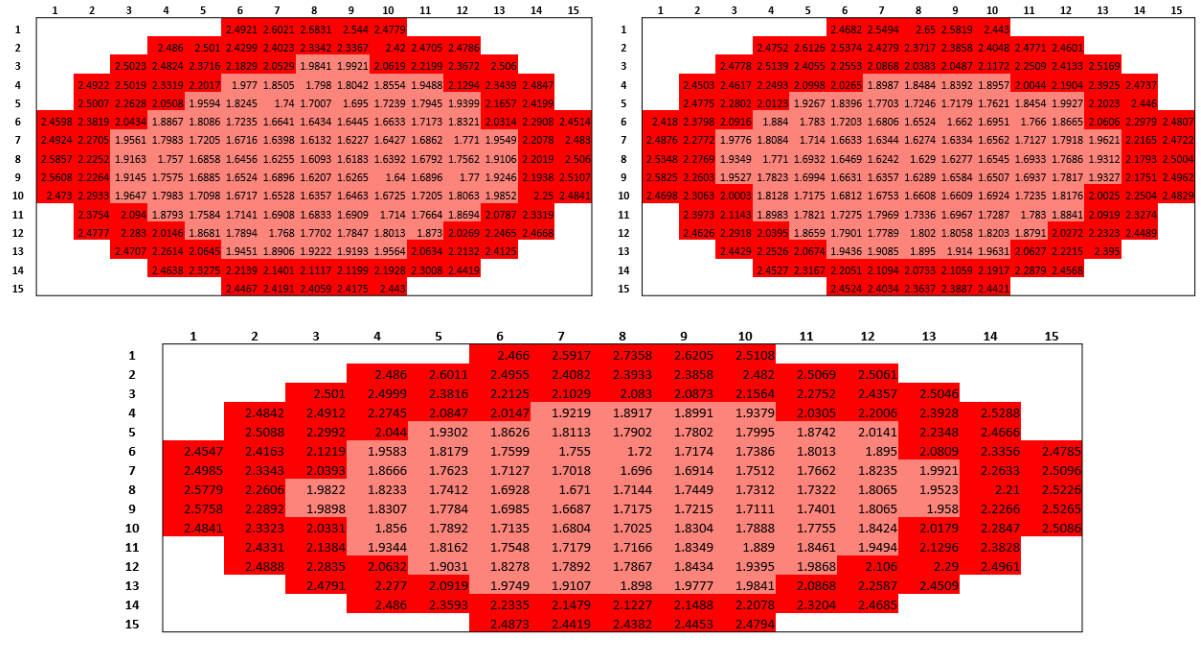

Figure S83 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaCl (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

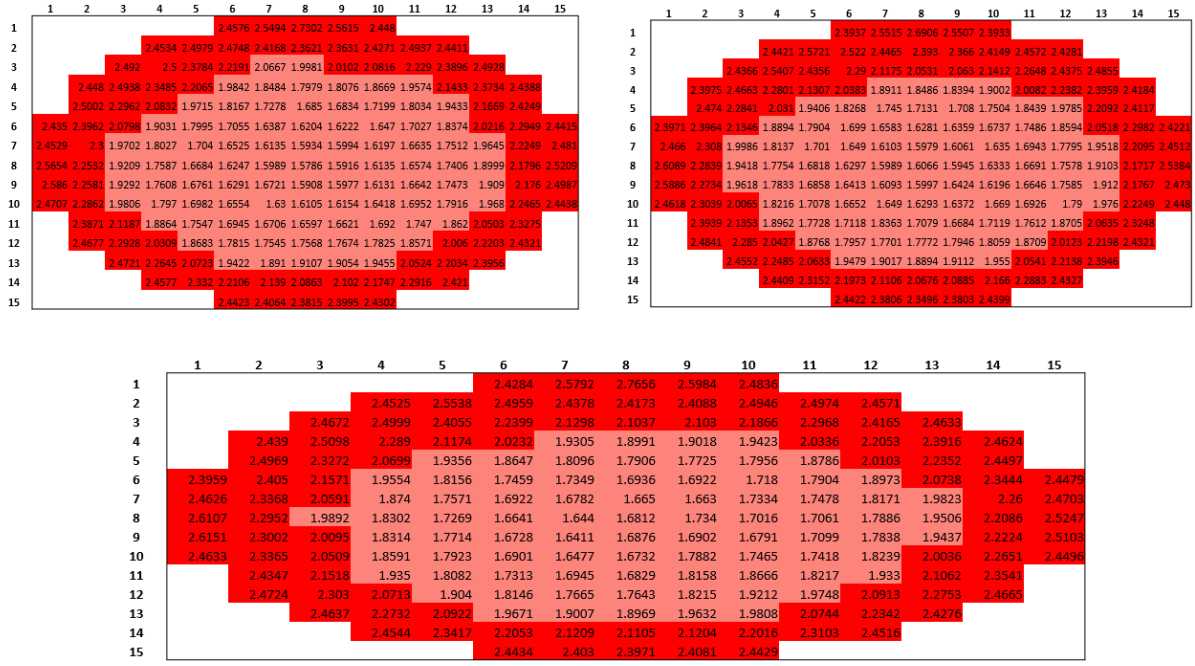

Figure S84 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaCl (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

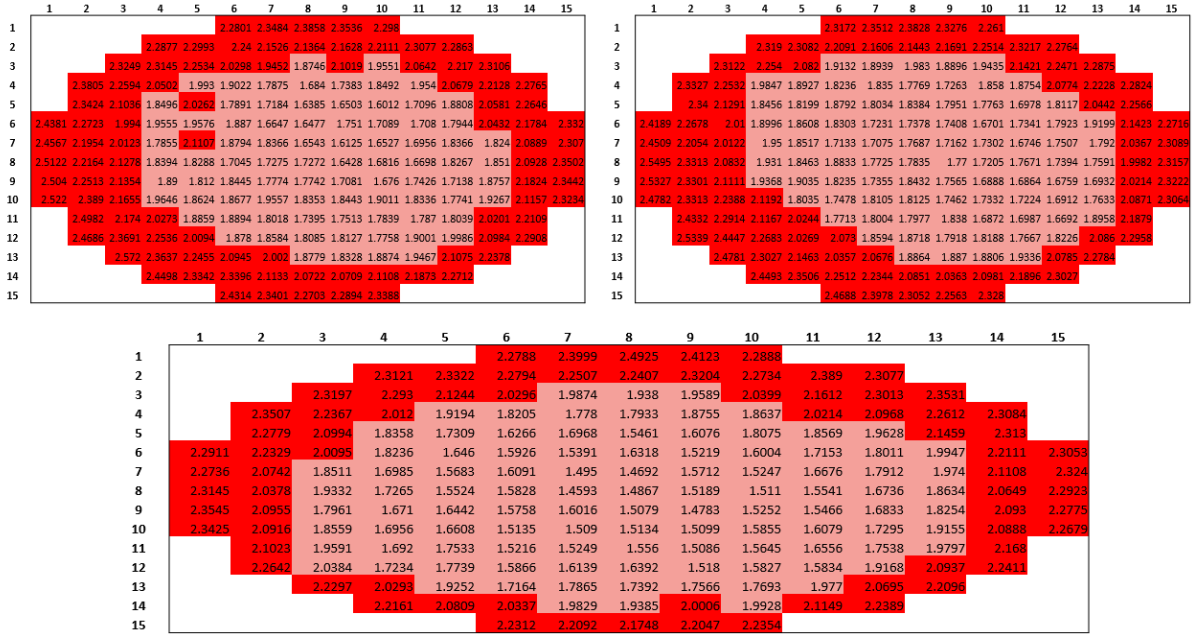

Figure S85 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

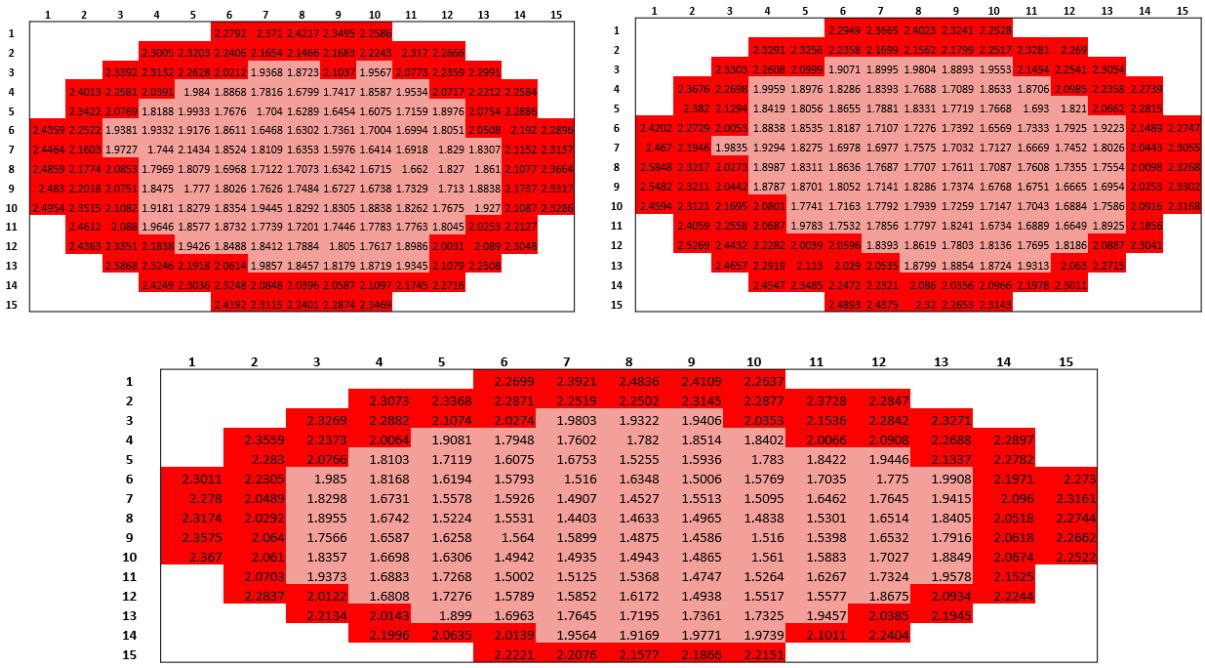

Figure S86 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

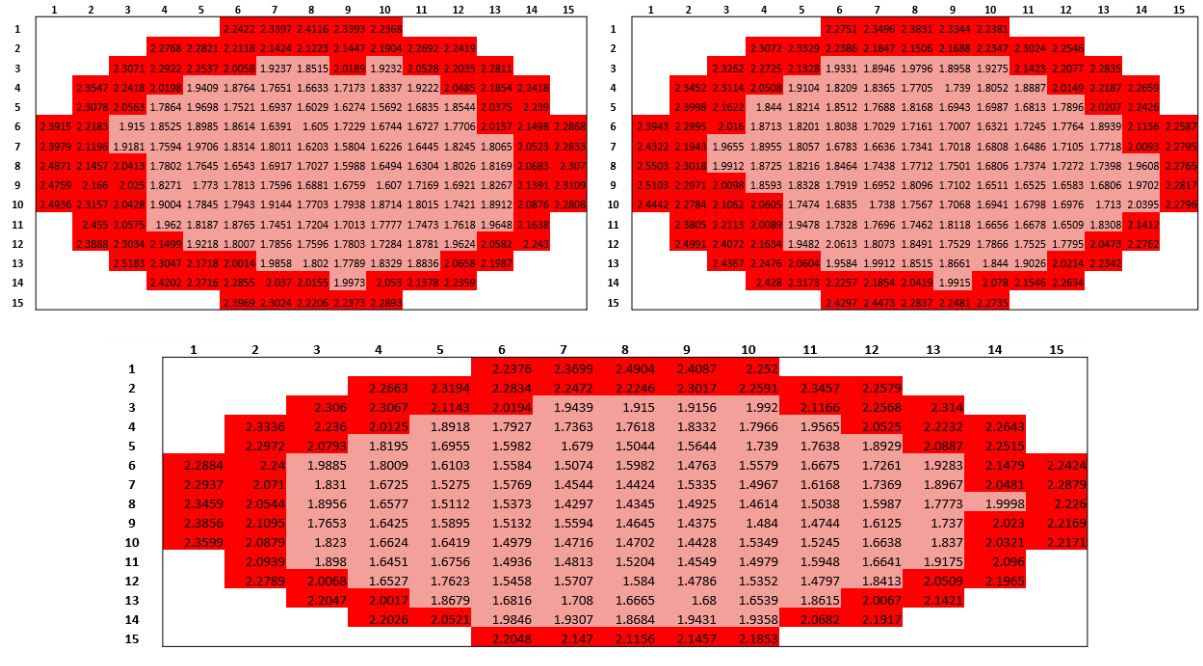

Figure S87 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

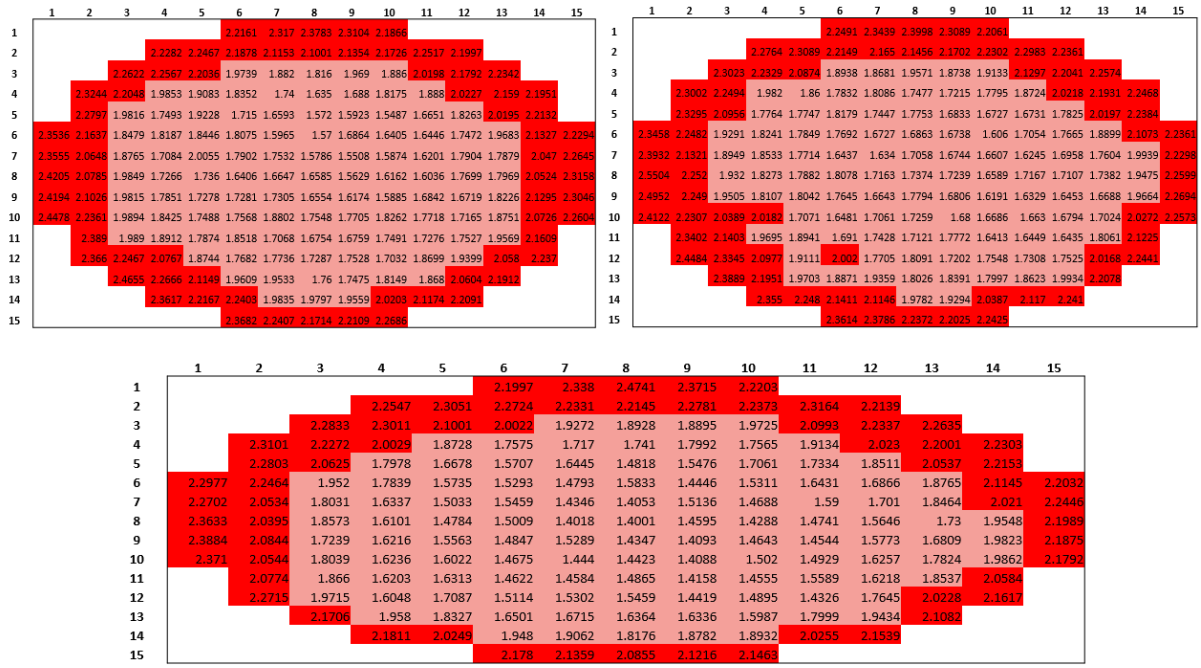

Figure S88 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

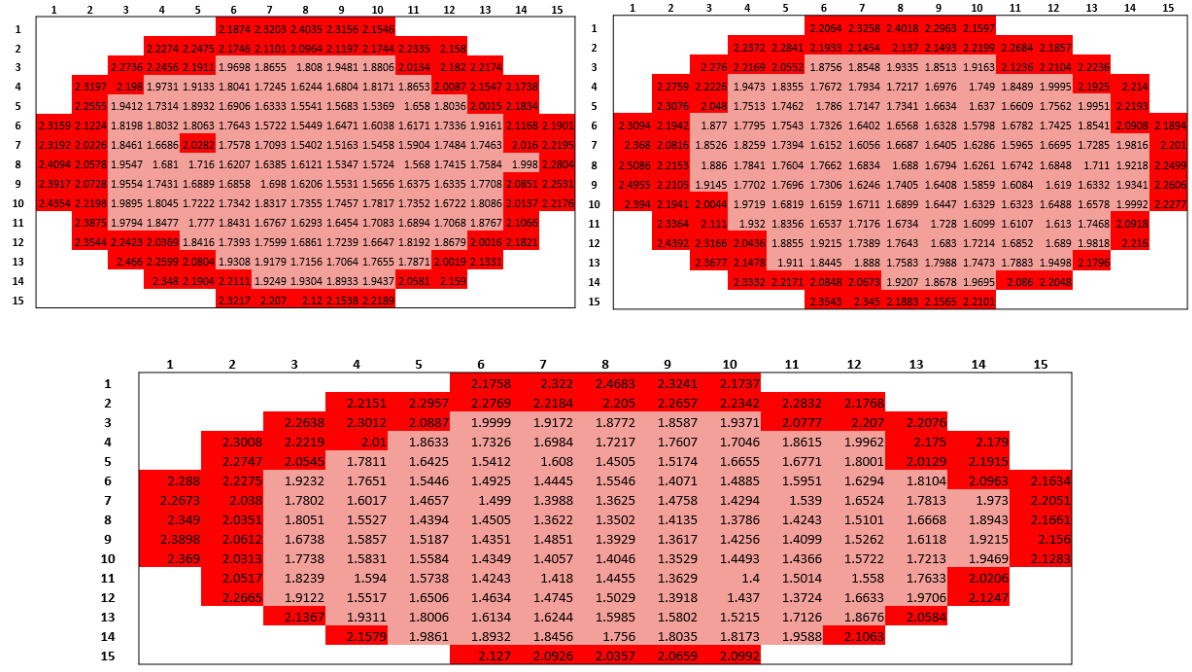

Figure S89 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous $NaNO_3$ (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

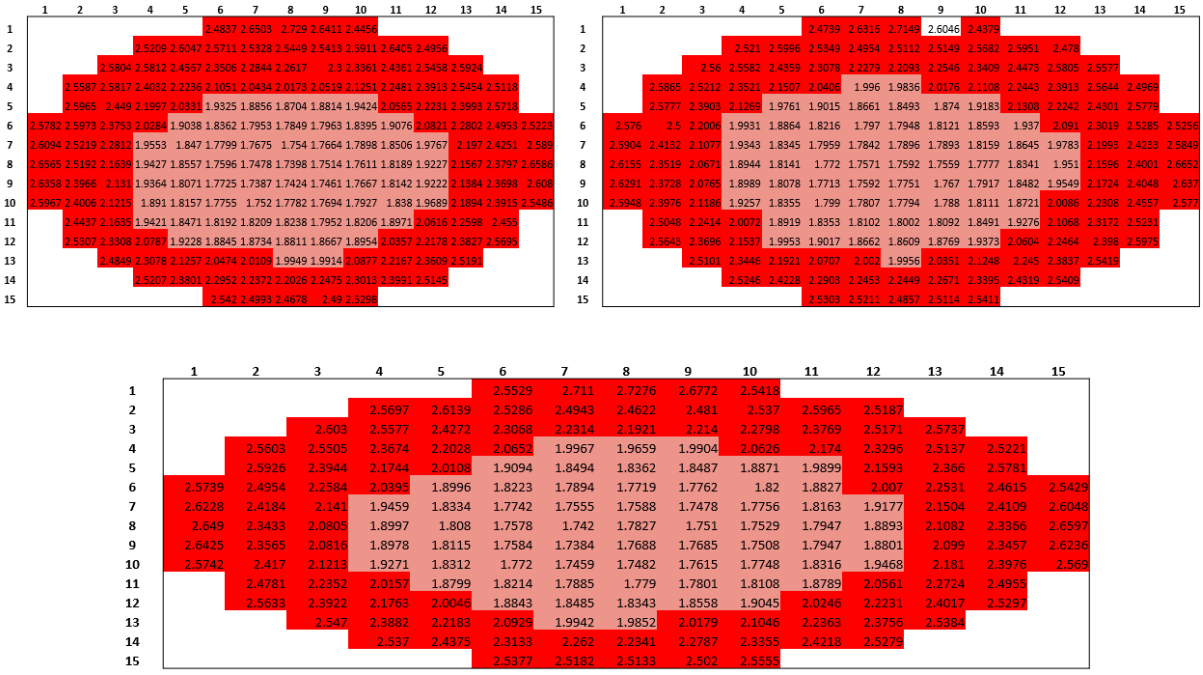

Figure S90 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

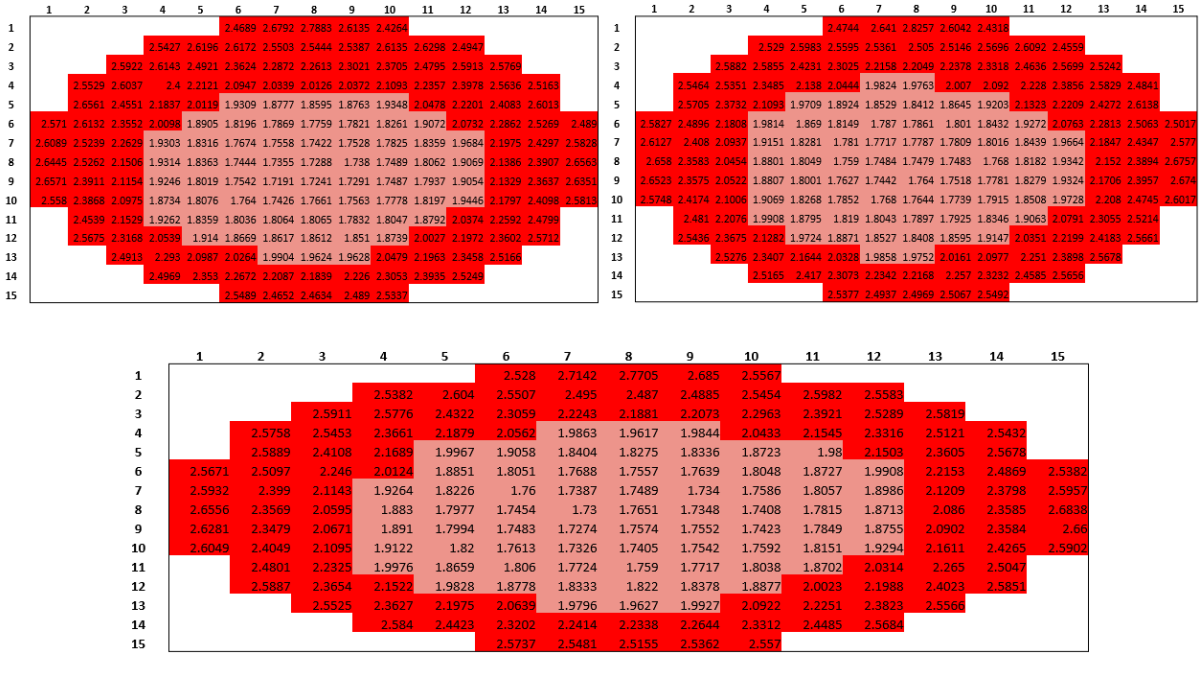

Figure S91 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

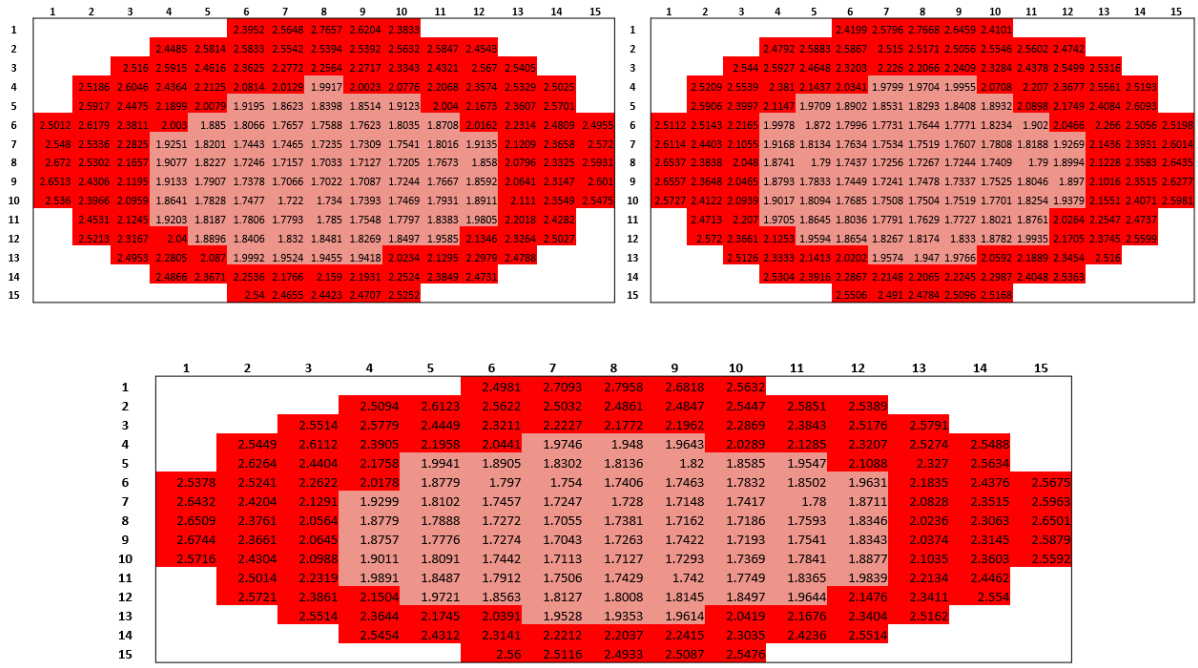

Figure S92 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

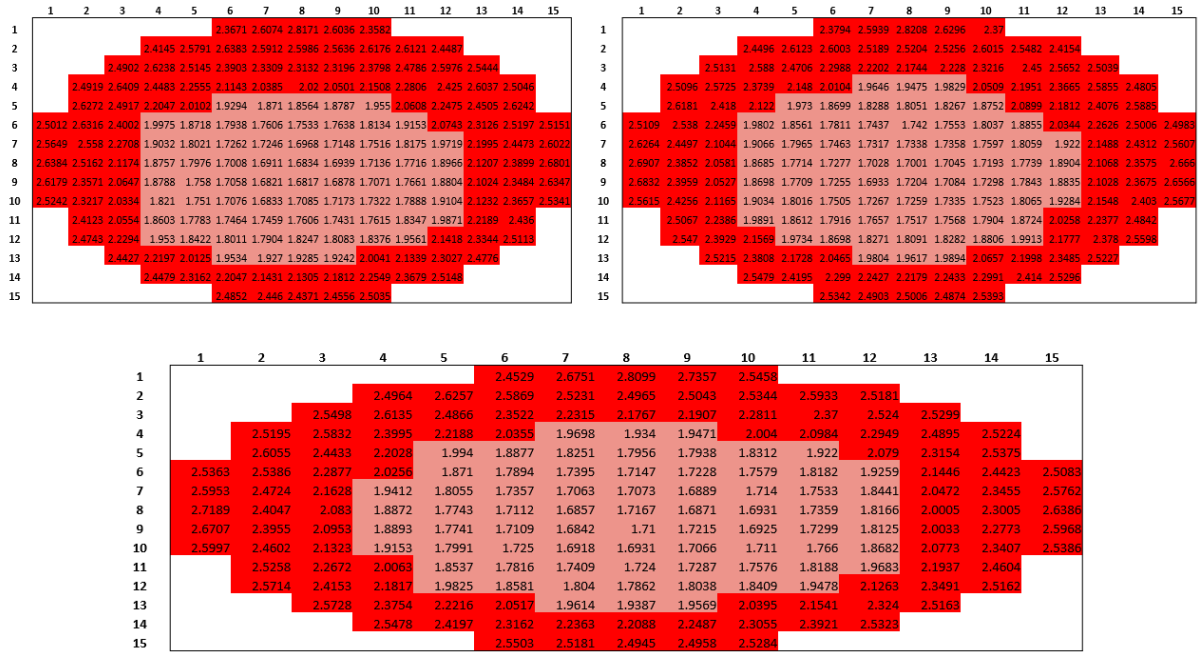

Figure S93 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

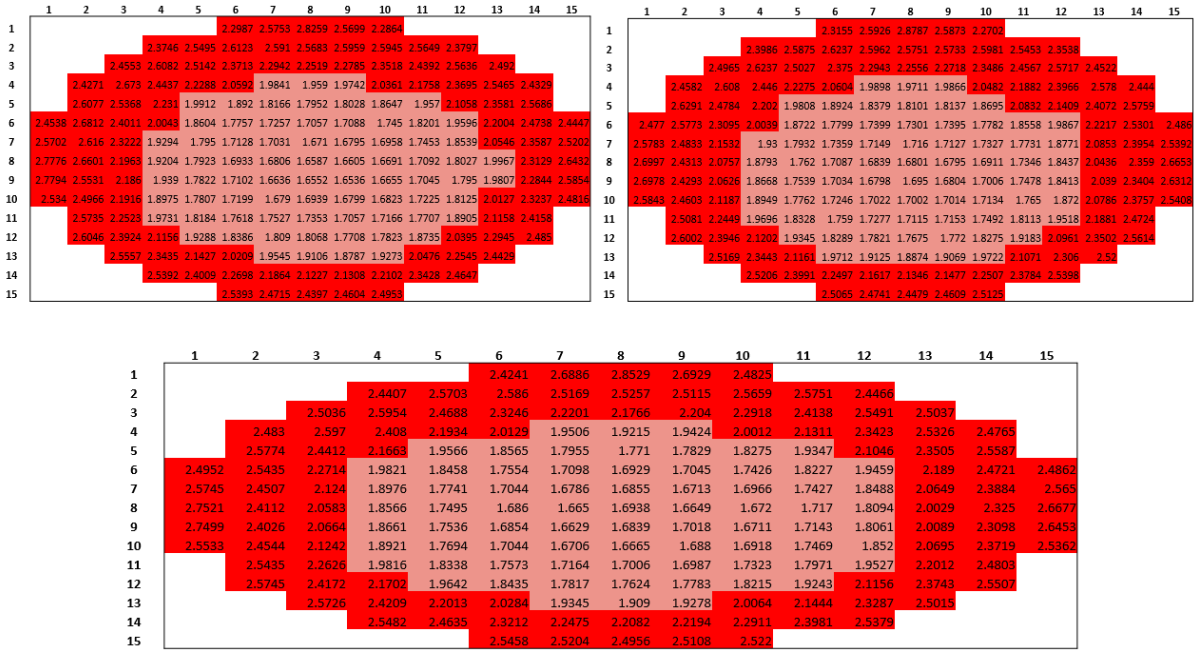

Figure S94 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous NaOBz (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

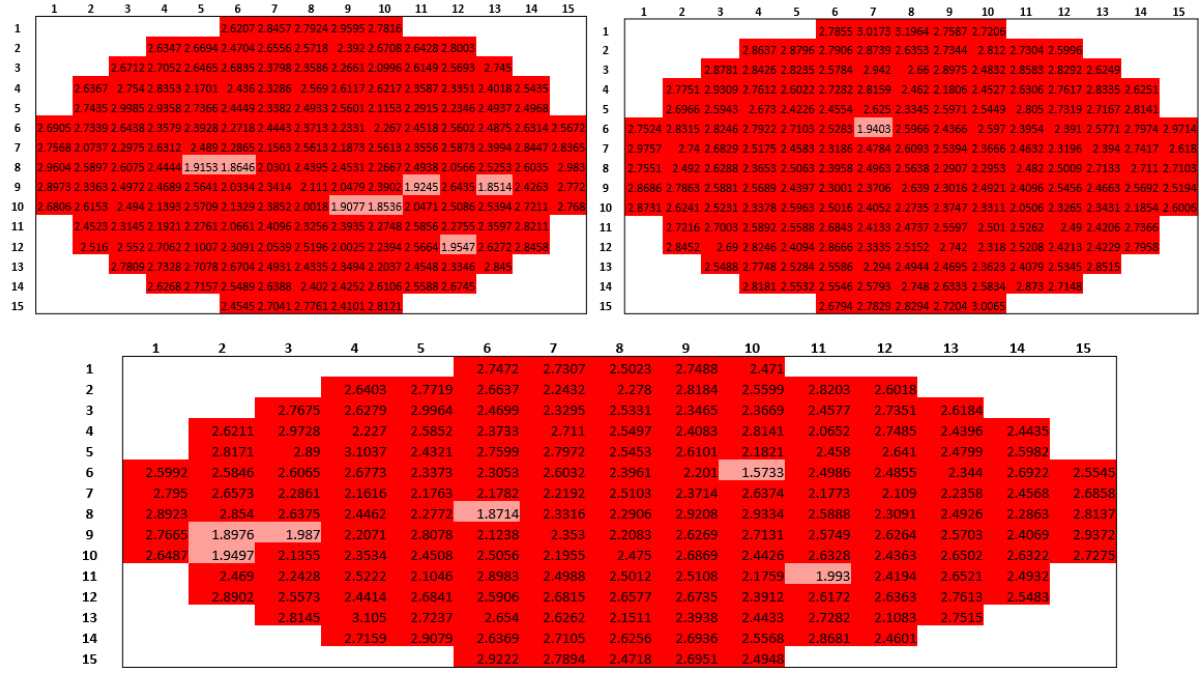

Figure S95 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous KCl (0.505 M) at 25 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

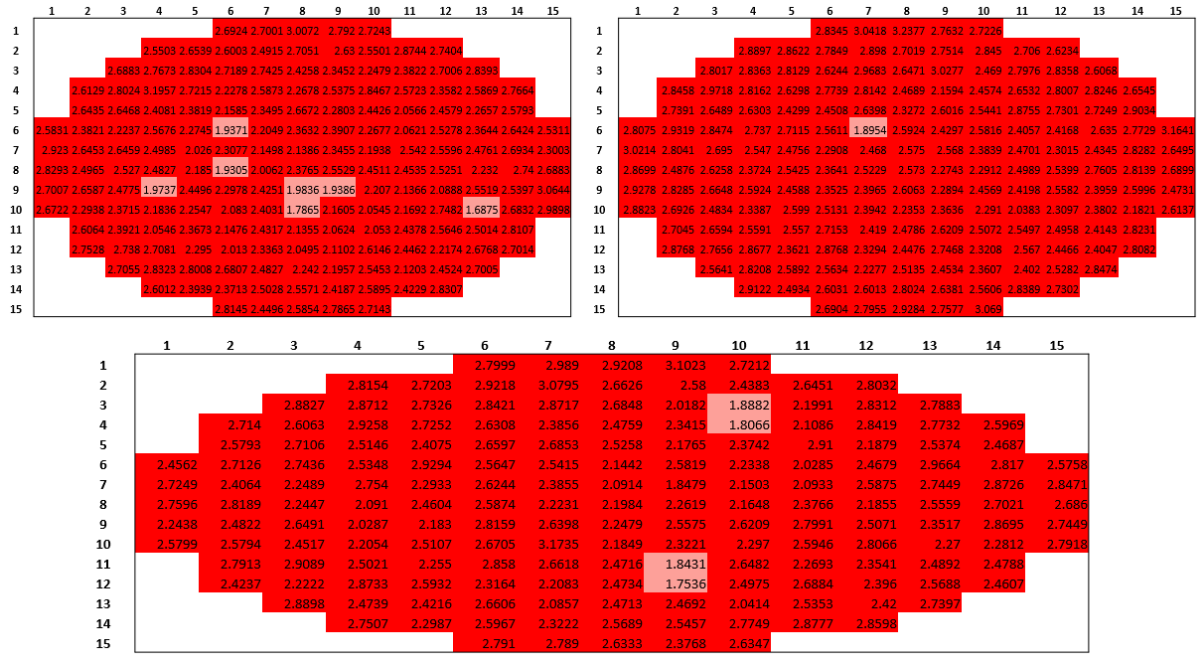

Figure S96 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous KCl (0.505 M) at 30 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

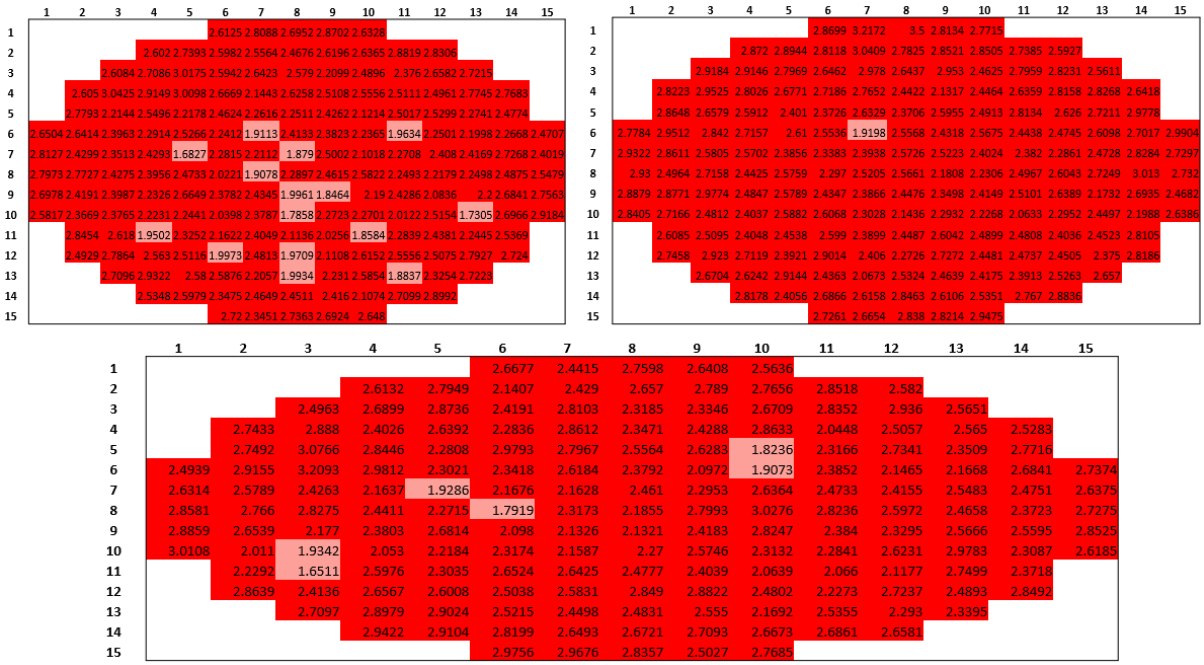

Figure S97 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous KCl (0.505 M) at 35 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

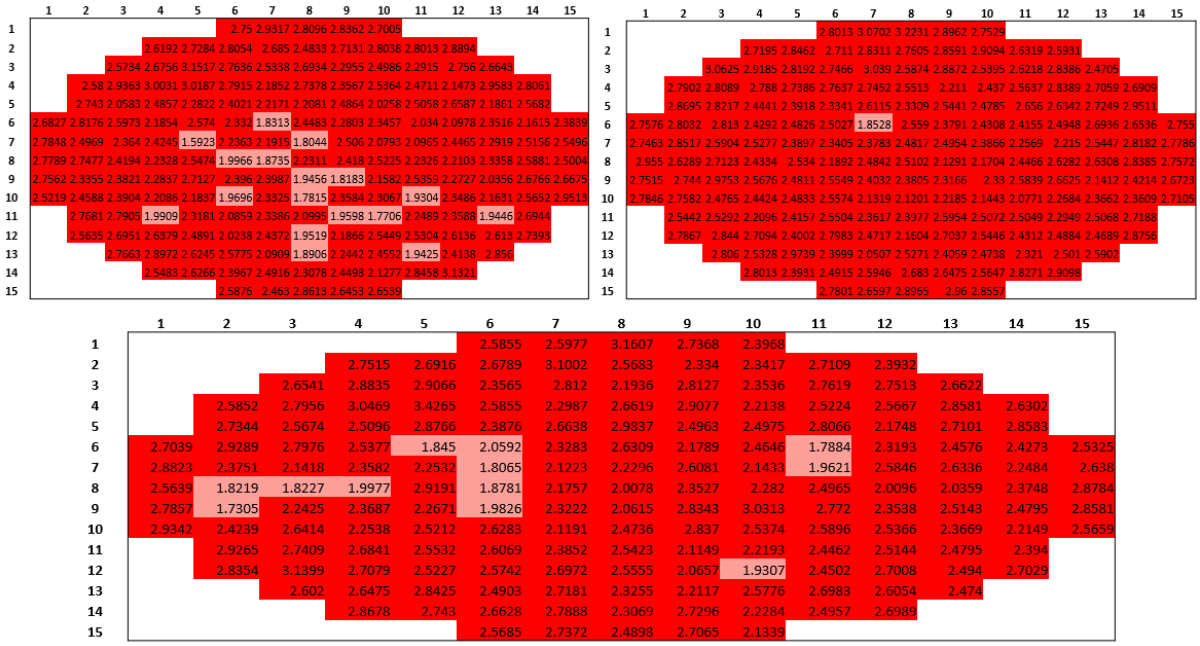

Figure S98 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous KCl (0.505 M) at 40 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

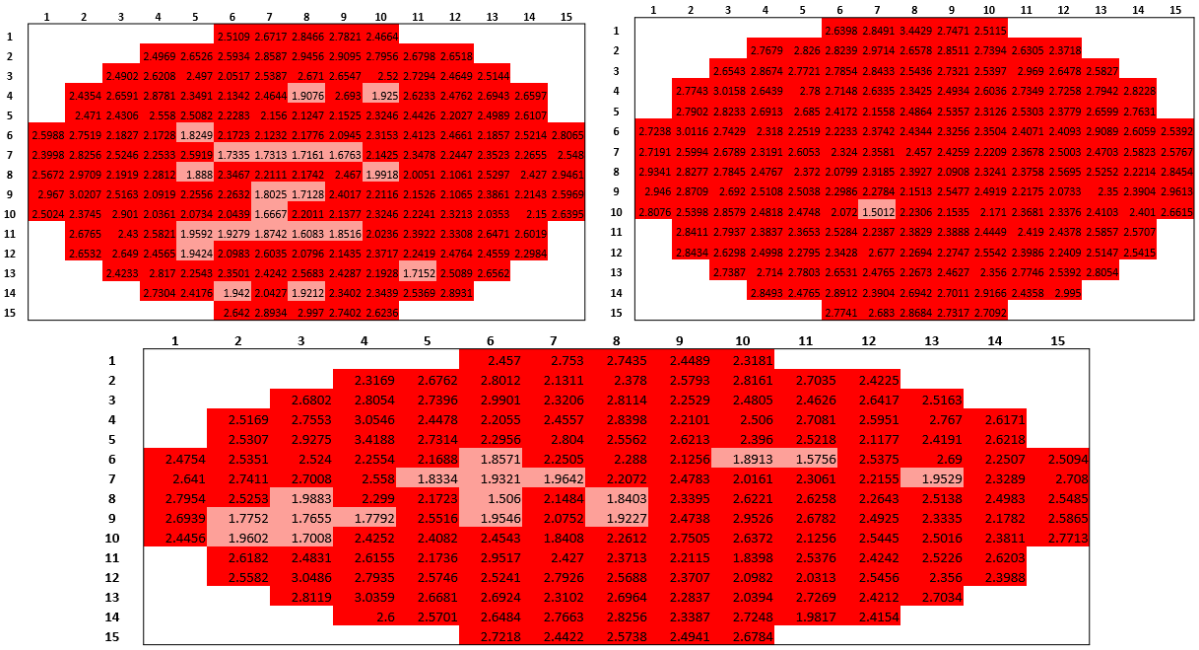

Figure S99 - OD_{450} n=3 intensity maps produced for **1** (1.5 mg/mL) in aqueous KCl (0.505 M) at 45 °C. Blue: OD_{450} = 0.00-0.99 AU. Pink: OD_{450} = 1.00-1.99 AU. Red: OD_{450} = 2.00-3.00 AU.

Overview

Table S2 - Average (n=3) OD_{450} minimum, maximum and ratio values (maximum/ minimum) taken from the spectra well scan data of **1** (1.5 mg/mL) in H_2O, DMSO and various aqueous salt solutions (0.505 M) at 25 °C - 45 °C.

Solution	OD_{450}	Temp (°C)						OD_{450}	Temp (°C)				
		25	30	35	40	45			25	30	35	40	45
H_2O	Min	0.06	0.06	0.06	0.05	0.05	NaOAc	Min	2.05	2.04	2.01	1.97	1.90
	Max	2.80	2.80	2.82	2.85	2.84		Max	2.91	2.96	2.96	2.94	2.92
	Min/Max	0.02	0.02	0.02	0.02	0.02		Min/Max	0.7	0.69	0.68	0.67	0.65
DMSO	Min	0.05	0.05	0.05	0.05	0.05	NaF	Min	1.60	1.44	1.45	1.43	1.40
	Max	3.50	3.50	3.50	3.50	2.95		Max	2.90	2.95	2.92	2.87	2.90
	Min/Max	0.01	0.01	0.01	0.01	0.02		Min/Max	0.55	0.49	0.5	0.5	0.48
Na_2HPO_4	Min	0.60	0.57	0.56	0.53	0.08	RbCl	Min	1.37	1.34	1.24	1.20	1.34
	Max	1.91	1.94	1.92	1.91	2.57		Max	2.77	2.83	2.82	2.74	2.80
	Min/Max	0.31	0.29	0.29	0.28	0.03		Min/Max	0.50	0.48	0.44	0.44	0.48
NaH_2PO_4	Min	1.38	1.33	1.29	1.19	0.14	NaCl	Min	1.69	1.66	1.65	1.63	1.61
	Max	2.51	2.58	2.50	2.45	2.87		Max	2.67	2.66	2.70	2.69	2.73
	Min/Max	0.55	0.51	0.52	0.49	0.05		Min/Max	0.63	0.63	0.61	0.61	0.59
Na_2CO_3	Min	0.86	0.83	0.80	0.68	0.11	$NaNO_3$	Min	1.58	1.57	1.54	1.52	1.48
	Max	2.47	2.48	2.47	2.43	2.21		Max	2.54	2.55	2.52	2.50	2.48
	Min/Max	0.35	0.33	0.32	0.28	0.05		Min/Max	0.62	0.61	0.61	0.61	0.60
Na_2SO_4	Min	1.55	1.54	1.51	1.50	1.36	NaOBz	Min	1.74	1.73	1.71	1.69	1.67
	Max	2.49	2.50	2.50	2.55	2.43		Max	2.72	2.80	2.78	2.82	2.85
	Min/Max	0.62	0.61	0.6	0.59	0.56		Min/Max	0.64	0.62	0.62	0.6	0.58
$NaHCO_3$	Min	1.25	1.21	1.18	1.15	1.08	KCl	Min	1.79	1.78	1.75	1.73	1.54
	Max	2.21	2.25	2.26	2.24	2.24		Max	3.10	3.20	3.25	3.27	3.29
	Min/Max	0.57	0.54	0.52	0.51	0.48		Min/Max	0.58	0.56	0.54	0.53	0.47

Fluorescence spectroscopy

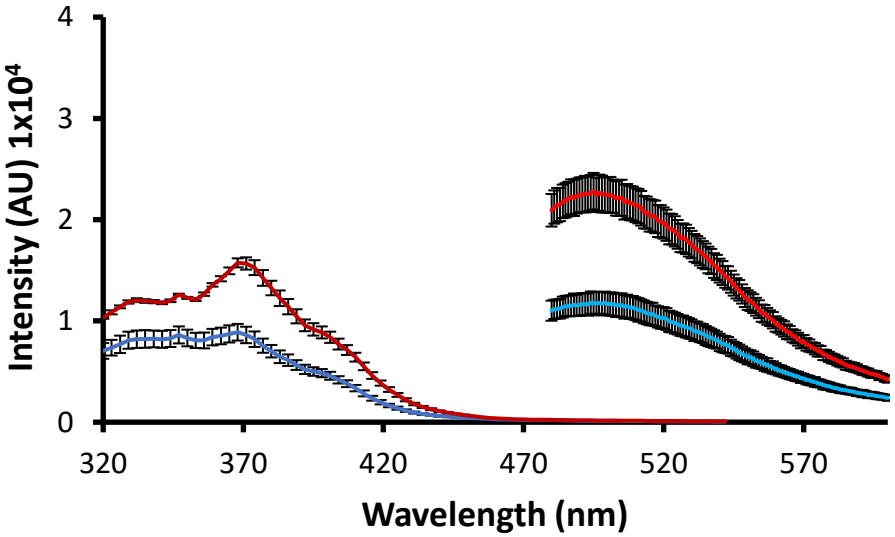

Figure S100 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in H_2O.

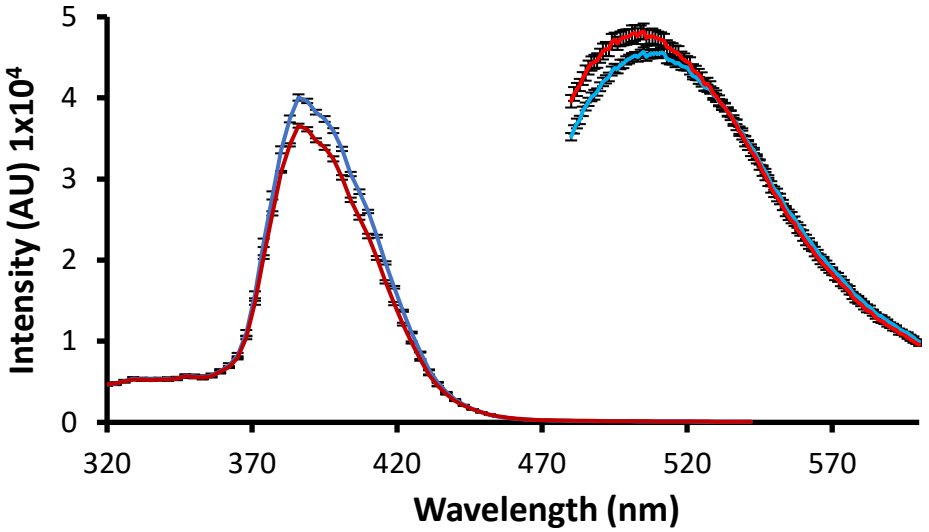

Figure S101 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in DMSO.

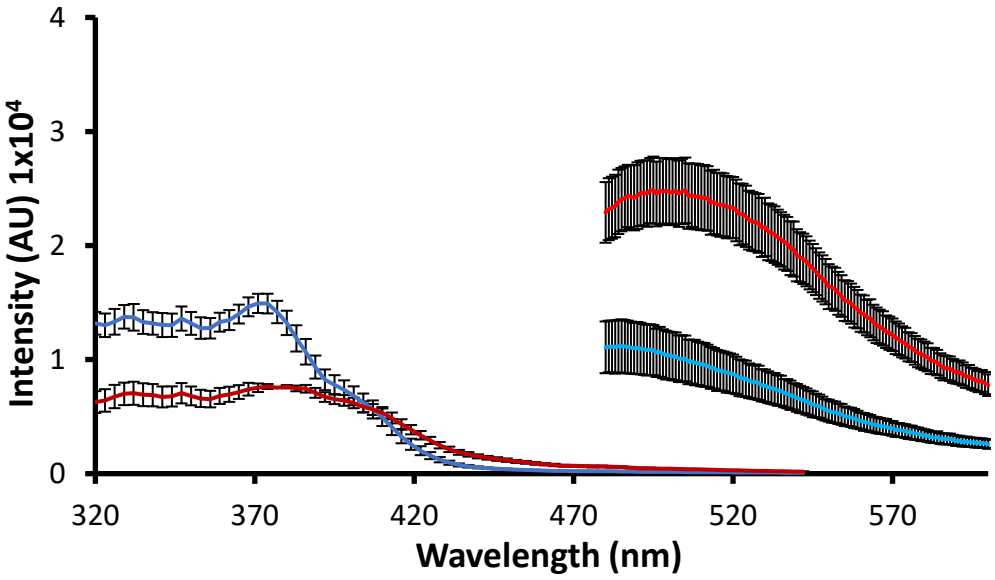

Figure S102 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous Na_2HPO_4 (0.505 M).

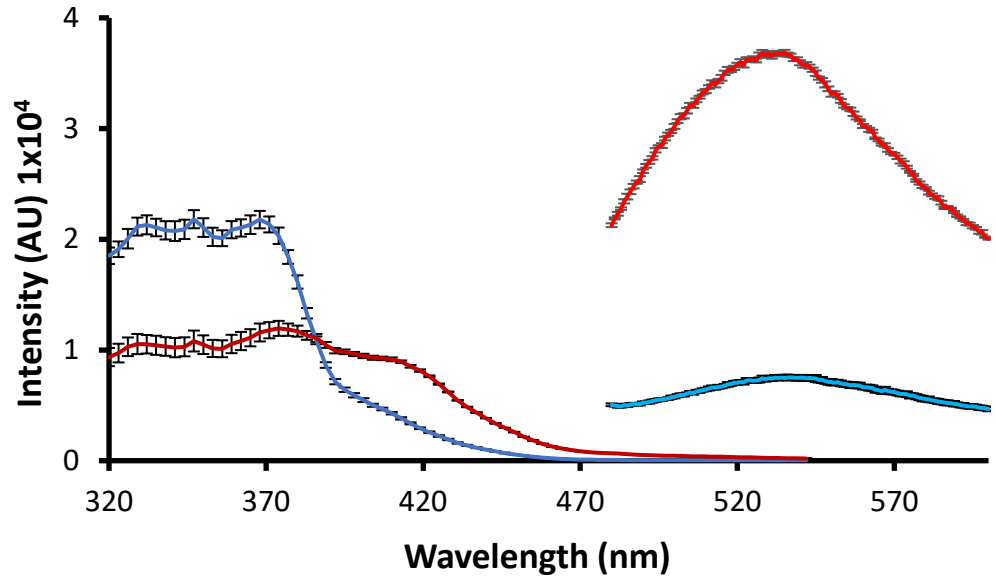

Figure S103 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous NaH_2PO_4 (0.505 M).

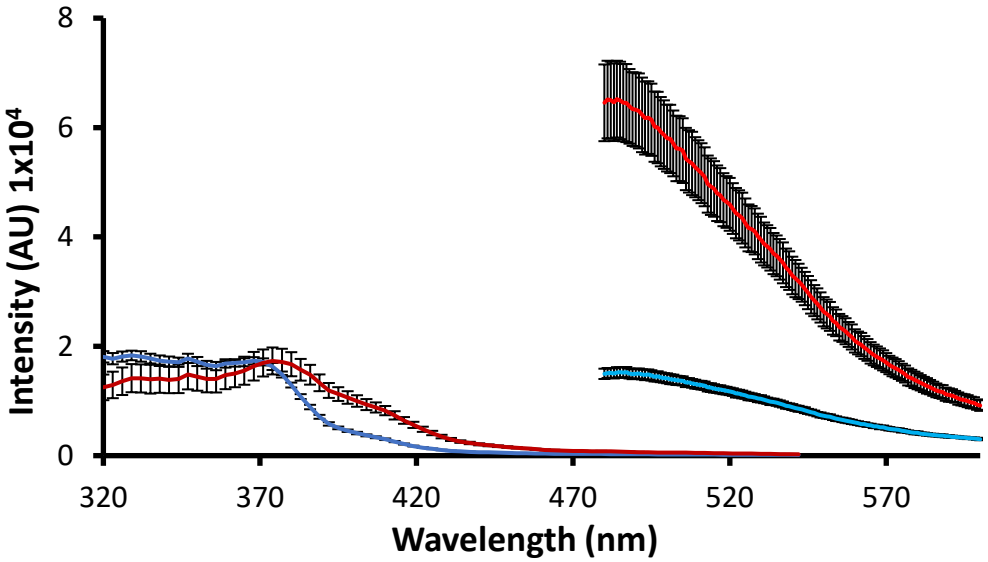

Figure S104 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous Na_2CO_3 (0.505 M).

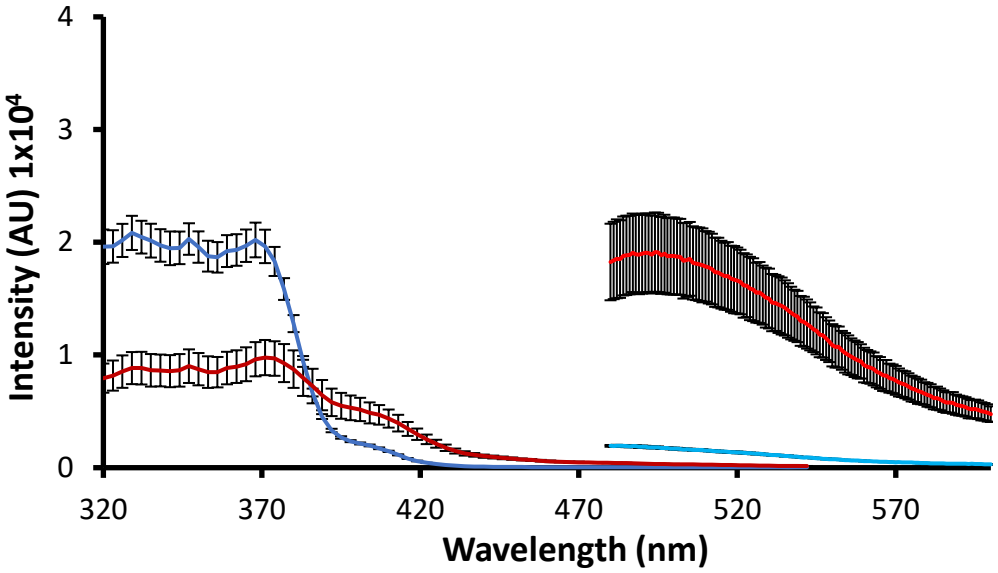

Figure S105 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous Na_2SO_4 (0.505 M).

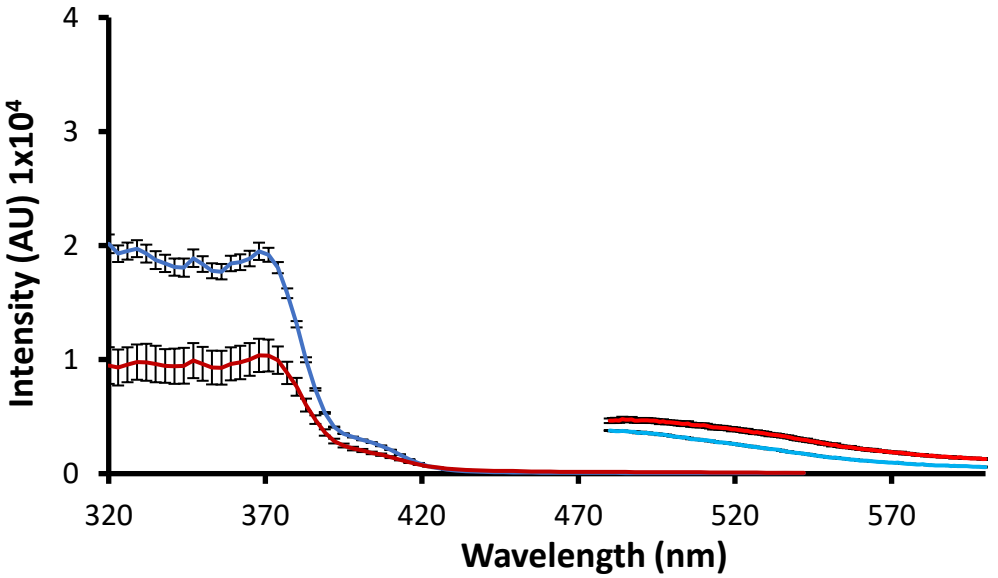

Figure S106 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous $NaHCO_3$ (0.505 M).

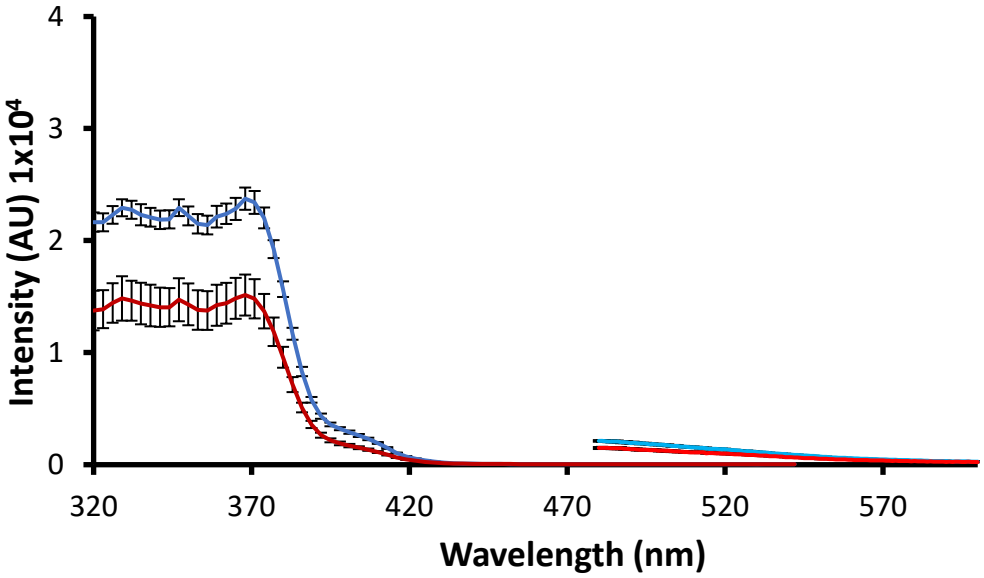

Figure S107 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous NaOAc (0.505 M).

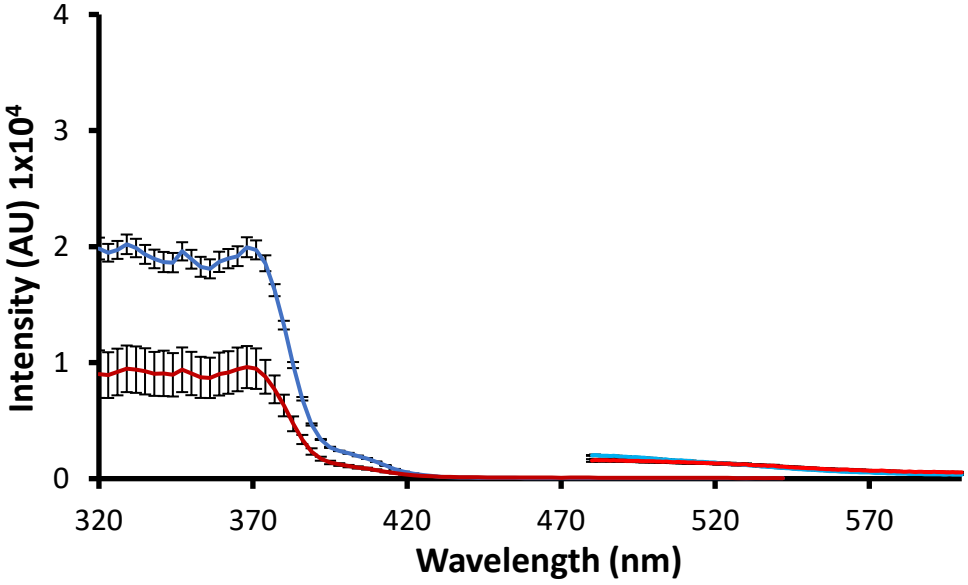

Figure S108 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous NaF (0.505 M).

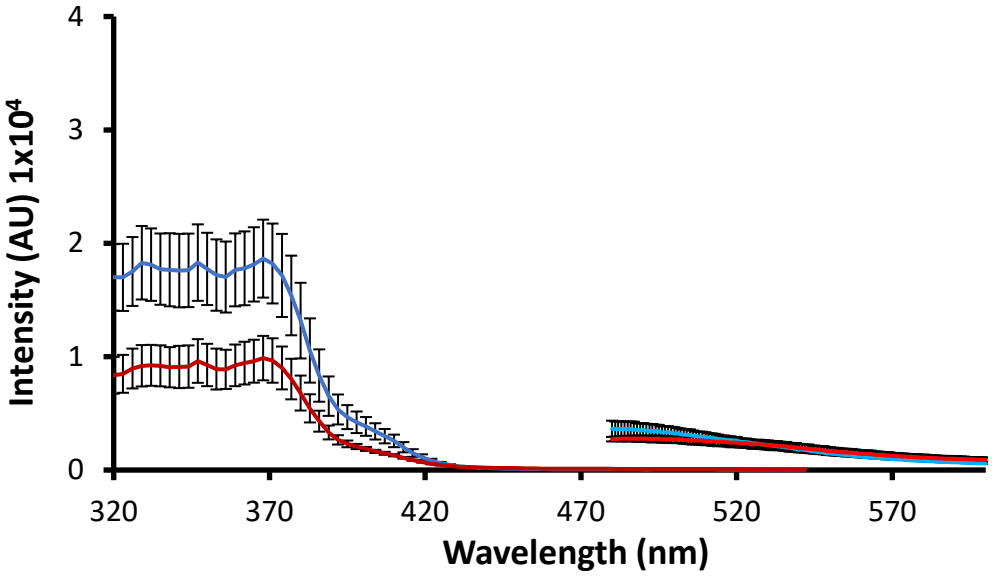

Figure S109 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous RbCl (0.505 M).

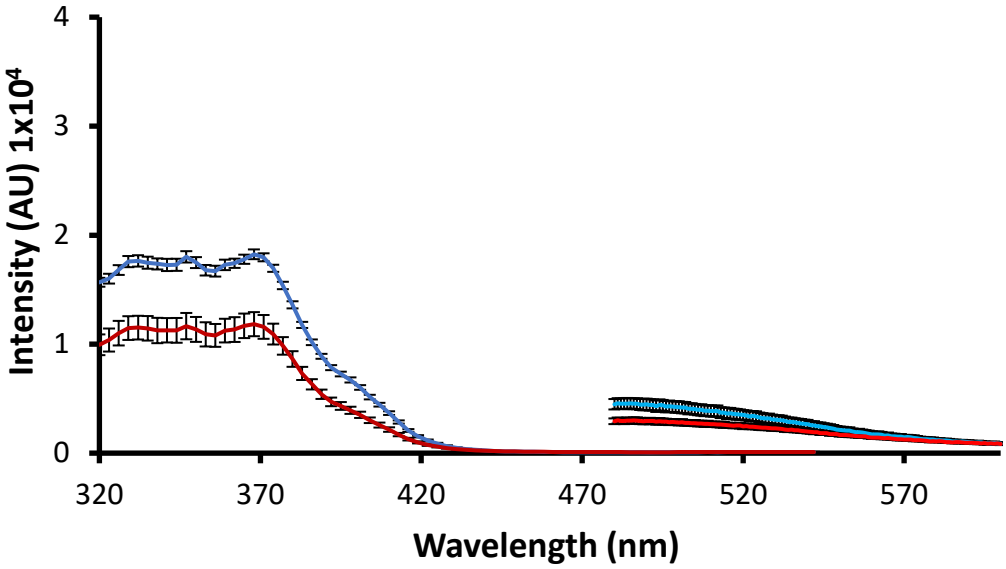

Figure S110 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous NaCl (0.505 M).

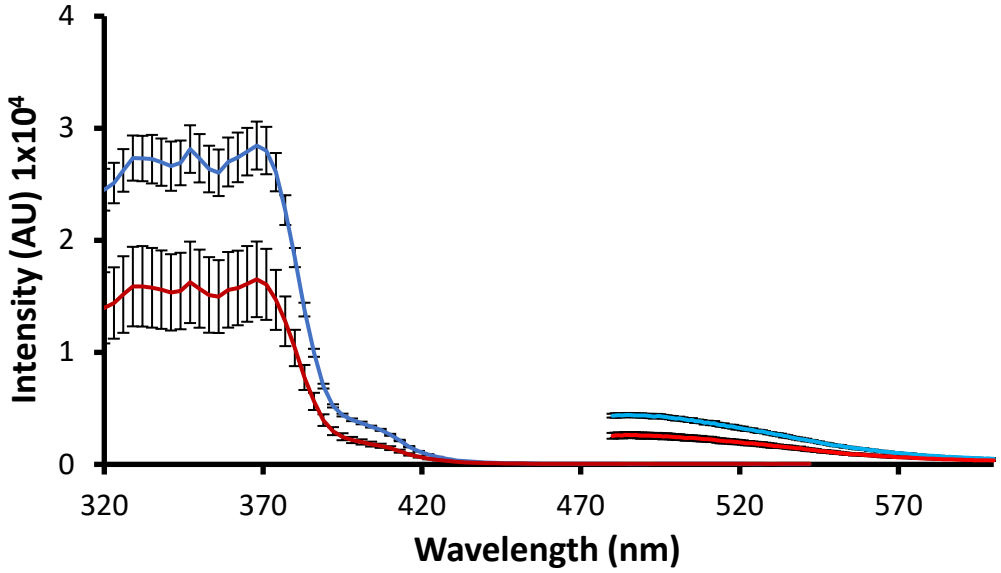

Figure S111 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous $NaNO_3$ (0.505 M).

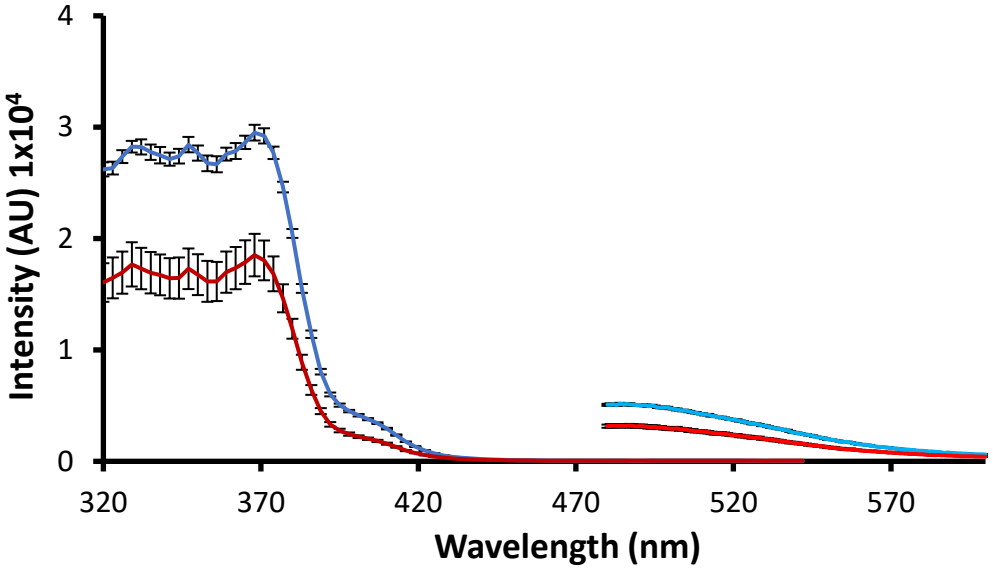

Figure S112 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous NaOBz (0.505 M).

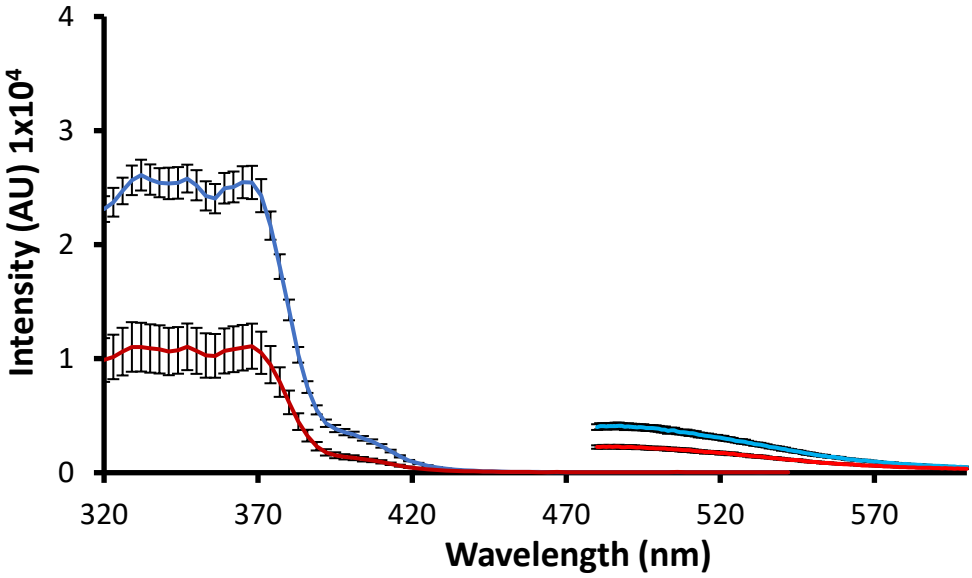

Figure S113 - Average (n=3) fluorescence excitation (left) and emission (right) spectra of **1** (1.5 mg/mL) at 25 °C (blue) and 45 °C (red) in aqueous KCl (0.505 M).

Uniformity experiments

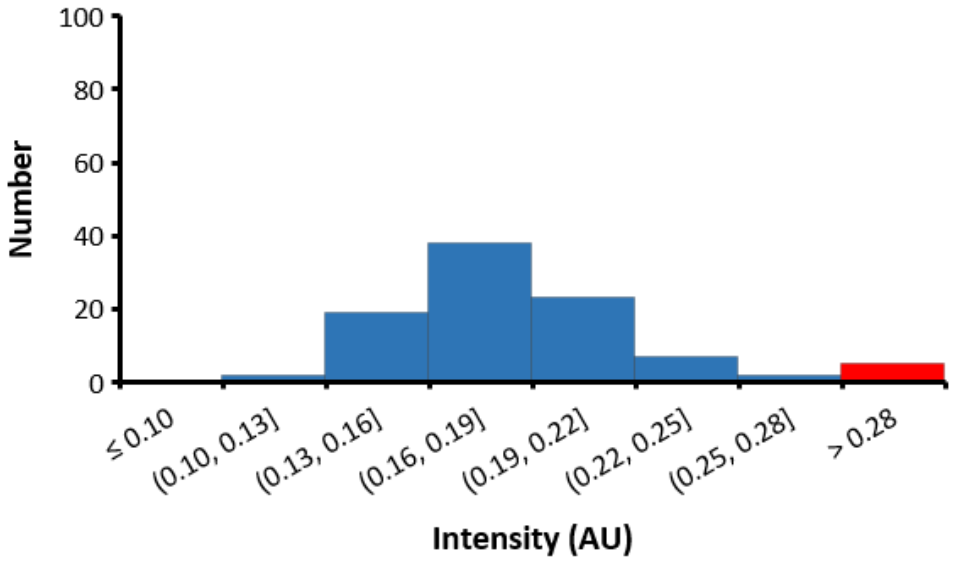

Figure S114 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in H_2O at 25 °C across the entirety of the 96-well microplate - 95 % of the data is within 2 σμ (blue).

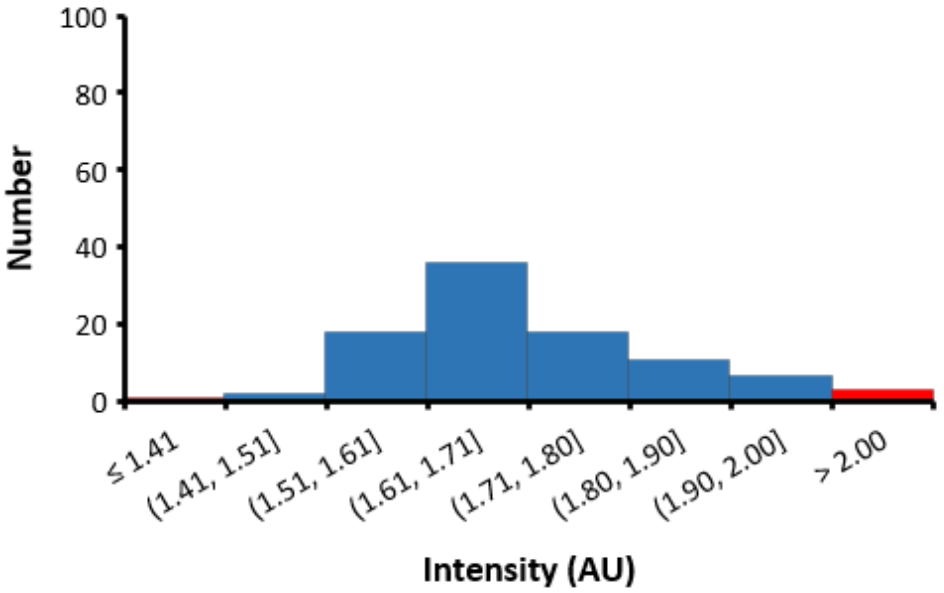

Figure S115 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in aqueous NaCl (0.505 M) at 25 °C across the entirety of the 96-well microplate - > 95 % of the data is within 2 σμ (blue).

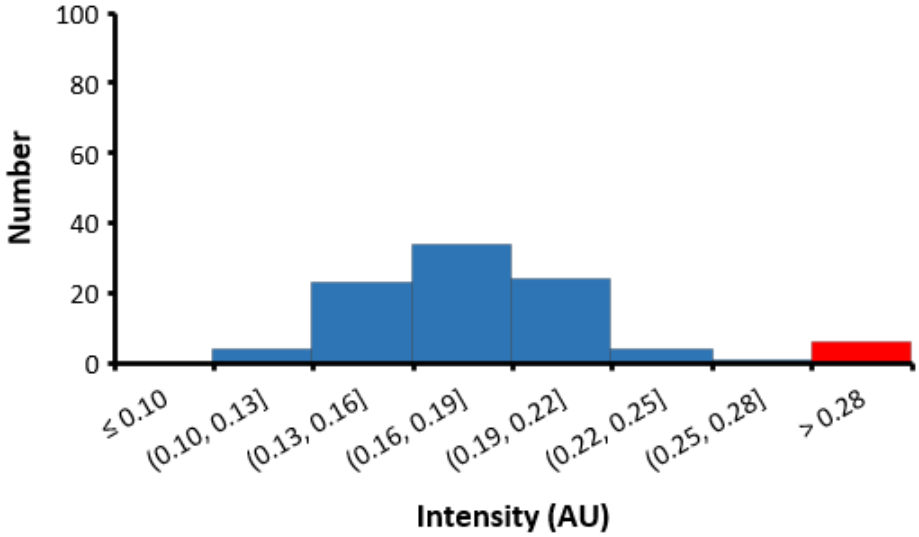

Figure S116 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in H_2O at 30 °C across the entirety of the 96-well microplate - 90 % of the data is within 2 σμ (blue).

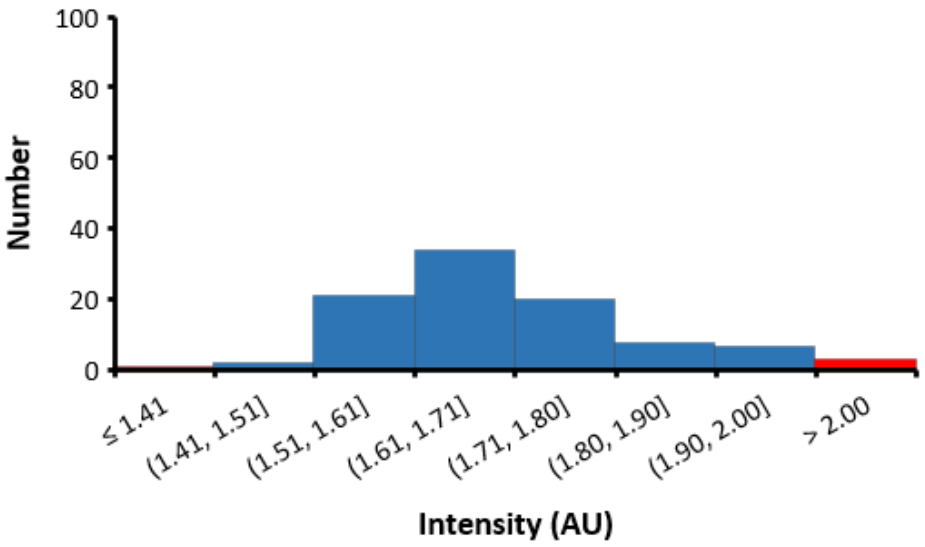

Figure S117 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in aqueous NaCl (0.505 M) at 30 °C across the entirety of the 96-well microplate - 94 % of the data is within 2 σμ (blue).

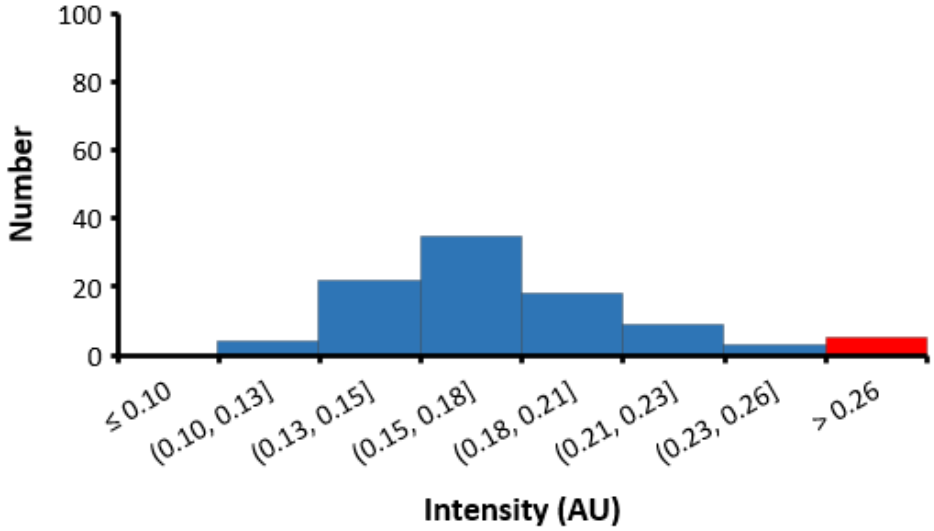

Figure S118 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in H_2O at 35 °C across the entirety of the 96-well microplate - > 95 % of the data is within 2 σμ (blue).

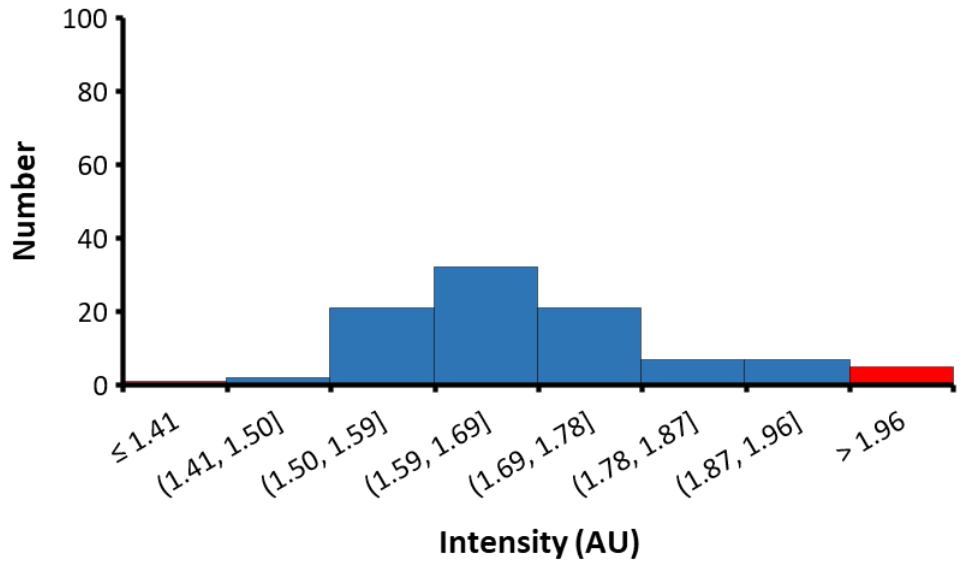

Figure S119 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in aqueous NaCl (0.505 M) at 35 °C across the entirety of the 96-well microplate - 95 % of the data is within 2 σμ (blue).

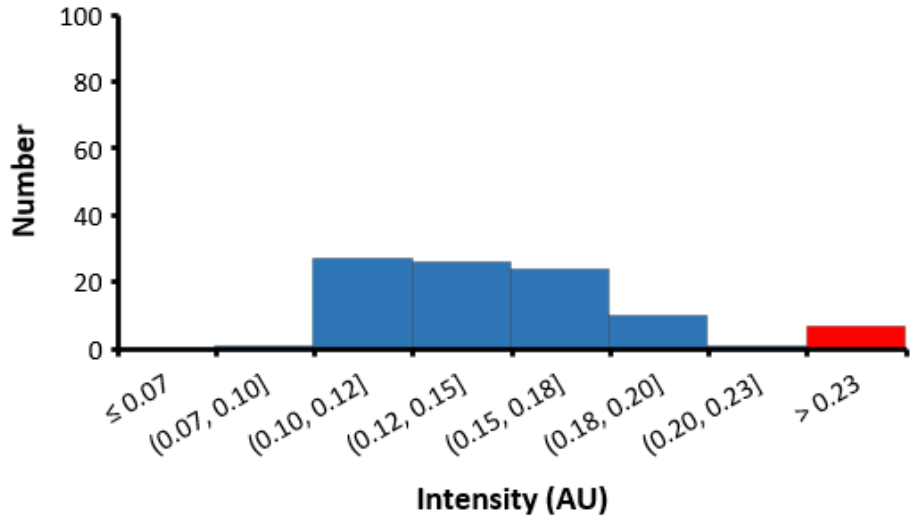

Figure S120 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in H_2O at 40 °C across the entirety of the 96-well microplate - 93 % of the data is within 2 σμ (blue).

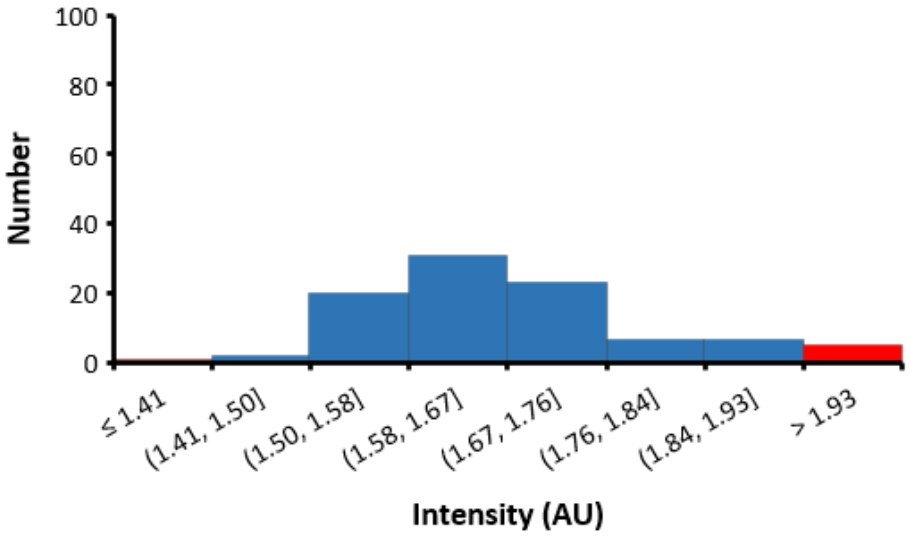

Figure S121 – Standard deviation (σ) data of the mean (μ) taken from Abs.$_{450}$ measurements of **1** (1.5 mg/mL), in aqueous NaCl (0.505 M) at 40 °C across the entirety of the 96-well microplate - 95 % of the data is within 2 σμ (blue).

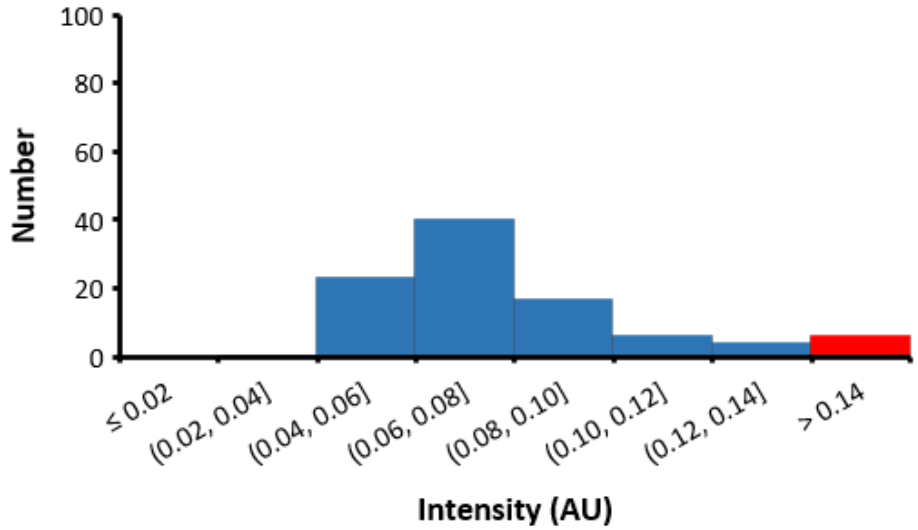

Figure S122 – Standard deviation (σ) data of the mean (μ) taken from Abs.$_{450}$ measurements of **1** (1.5 mg/mL), in H_2O at 45 °C across the entirety of the 96-well microplate - 94 % of the data is within 2 σμ (blue).

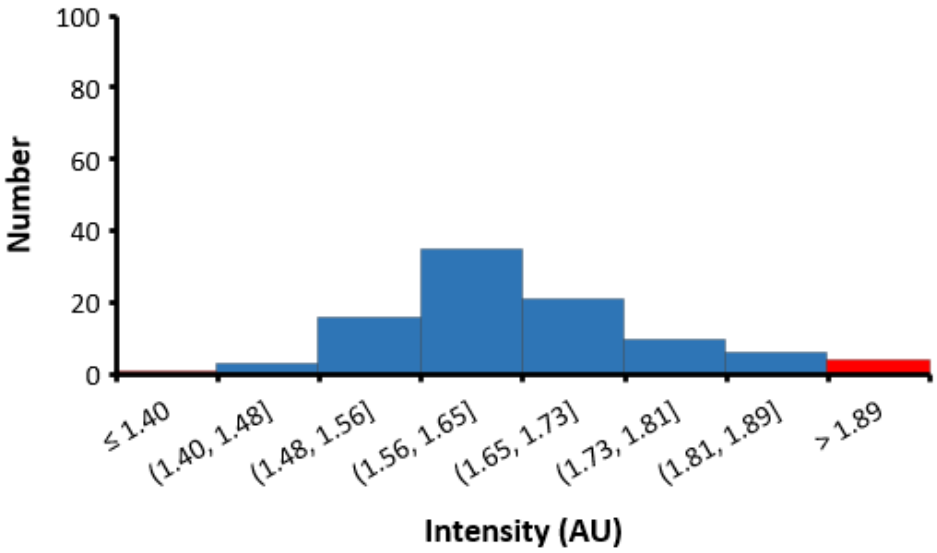

Figure S123 – Standard deviation (σ) data of the mean (μ) taken from $Abs._{450}$ measurements of **1** (1.5 mg/mL), in aqueous NaCl (0.505 M) at 45 °C across the entirety of the 96-well microplate - 95 % of the data is within 2 σμ (blue).

References

1. L. J. White, J. E. Boles, N. Allen, L. S. Alesbrook, J. M. Sutton, C. K. Hind, K. L. F. Hilton, L. R. Blackholly, R. J. Ellaby, G. T. Williams, D. P. Mulvihill and J. R. Hiscock, *J. Mater. Chem. B*, 2020, **8**, 4694–4700.
2. R. O. Harrison and B. D. Hammock, *J. Assoc. Off. Anal. Chem.*, 1988, **71**(5), 981-987.
3. L. J. White, N. J. Wells, L. R. Blackholly, H. J. Shepherd, B. Wilson, G. P. Bustone, T. J. Runacres and J. R. Hiscock, *Chem. Sci.*, 2017, **8**, 7620–7630.