

Supplementary Material

Screening bisphenols in complex samples via a planar *Arxula adenivorans* bioluminescence bioassay

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Table S1 Origin of the (a) six tin cans, (b) five thermal papers with concentration, and (c) eleven botanicals

a) Six differently coated R&D tin cans from Ceritec SRL, Metlac Group, Italy						
ID	34	36	38	39	64	65
b) Five thermal papers collected from local retailers in Giessen, Germany, in January 2022						
ID	Distributor, City, Country			c [g/mL]		
A	Aldi Süd, Mühlheim an der Ruhr, Germany			0.13		
E	Esso, Echo Tankstellen, Hamburg, Germany			0.17		
O	Obi, Wermelskirchen, Germany			0.17		
R	Rewe, Köln, Germany			0.20		
V	Vision Augenoptik & Kontaktlinsen, Giessen, Germany			0.20		
c) Eleven dried botanical powders from Martin Bauer Group, Vestenbergsgreuth, Germany						
ID	Common name	Botanical name		Family	Plant part	
1	Acerola	Malpighia glabra L.		Malpighiaceae	fruit	
2	Galangal	Alpinia officinarum Hance		Zingiberaceae	root	
3	Hops	Humulus lupulus L.		Cannabaceae	blossom	
4	Chamomile	Matricaria chamomilla L.		Asteraceae	blossom	
5	Orange	Citrus × aurantium L.		Rutaceae	peel	
6	Oregano	Origanum vulgare L.		Lamiaceae	herb	
7	Rooibos	Aspalathus linearis (Burm. f.) R. Dahlgren		Fabaceae	leaf	
8	Licorice	Glycyrrhiza glabra L.		Fabaceae	root	
9	Thyme	Thymus vulgaris L.		Lamiaceae	herb	
10	Hawthorn	Crataegus sp.		Rosaceae	leaf	
11	Lemon	Citrus × limon (L.) Osbeck		Rutaceae	peel	

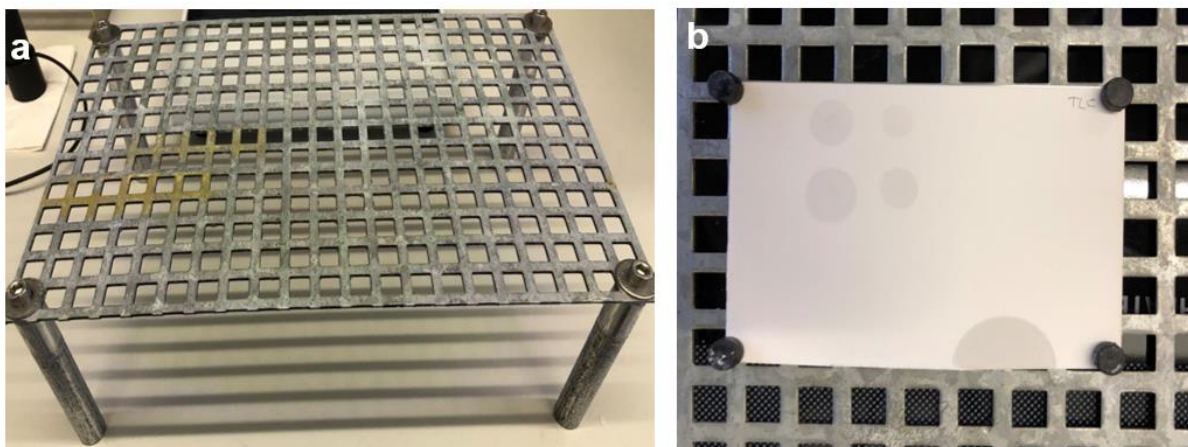


Fig. S1 Setup for plate incubation: metal perforated plate (a) and TLC plate with magnets attached to the underside of the metal plate. The construction was placed in a closed water bath, so that the distance between the TLC plate and the water was 3 cm.

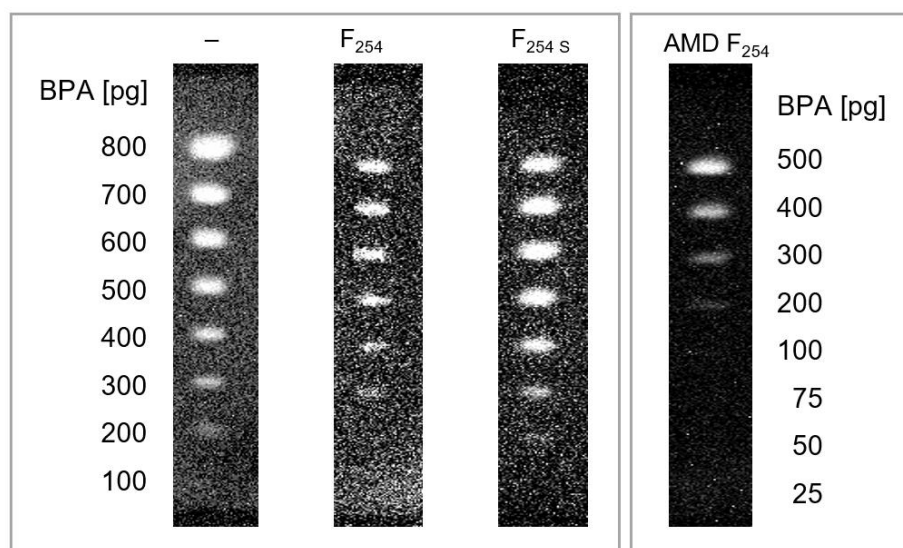


Fig. S2 Study of the bioluminescent signal response and dose-response dependency of BPA (100–800 or 25–500 pg/band) on four different types of HPTLC plates via the pA-YBS bioluminescence bioassay with a 2-h incubation; bioluminescence depicted as greyscale image with a 10-min exposure time.

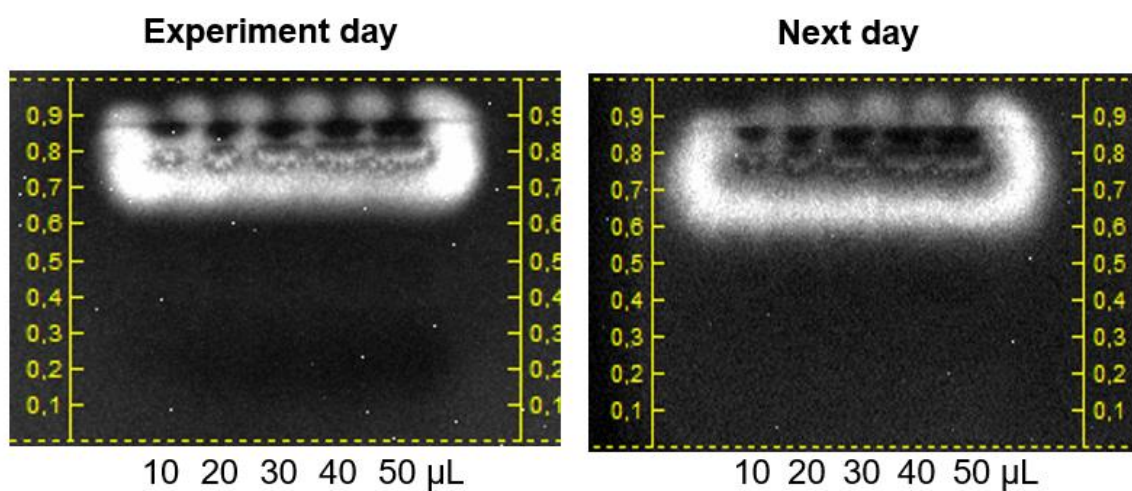


Fig. S3 Bioautogram of thermal paper V (Table 1) at different amounts (10–50 μL) on HPTLC plate silica gel 60. After the bioluminescence measurement (experiment day), the plate was dried and stored overnight. To reactivate the luciferase reaction on the next day, the plate was incubated for 20 min in the water bath (Figure S1), and then the bioluminescence was recorded with a 10-min exposure time.