**An efficient screening of dissolution modulators of Mg alloys: Combining high-throughput multi-well exposure with topographical quantification of volume loss and pitting corrosion**

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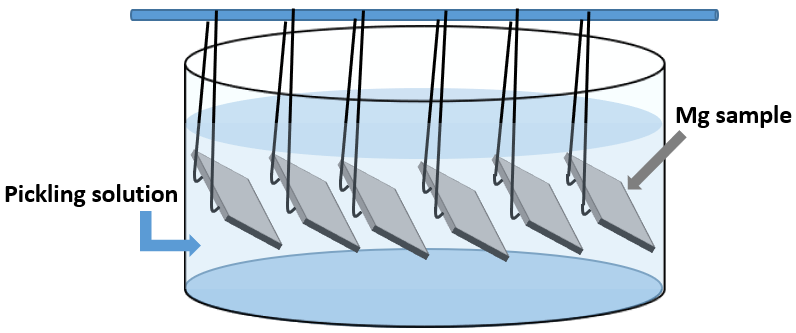
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***Figure S1*** Schematic representation of the bath for acid etching pre-treatment and chromic acid cleaning, used for removing the corrosion products.

***Table S1*** The elemental composition of the extruded AZ31 alloy. The values are in ppm or in wt.% when indicated.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Element** | **Al** | **Cu** | **Mn** | **Fe** | **Ni** | **Zn** | **Si** | **Ca** | **Sn** | **Zr** | **Ce** | **La** | **Mg** |
| **Weight Composition** | 2.70±0.02% | 27 | 0.22% | 20±1 | 2±0.5 | 0.87±0.01% | 158±2.0 | <1 | <5 | <3 | 1 | <1 | 94.19% |

|  |  |  |
| --- | --- | --- |
|  | **Before chromic acid cleaning** | **After chromic acid cleaning** |
| **1-1** |  |  |
| **1-2** |  |  |
| **1-3** |  |  |
| **1-4** |  |  |
| **1-5** |  |  |
| **1-6** |  |  |
| **2-1** |  |  |
| **2-2** |  |  |
| **2-3** |  |  |
| **2-4** |  |  |
| **2-5** |  |  |
| **3-1** |  |  |
| **3-2** |  |  |
| **3-3** |  |  |
| **3-4** |  |  |
| **3-5** |  |  |
| **3-6** |  |  |
| **4-1** |  |  |
| **4-2** |  |  |
| **4-3** |  |  |
| **4-4** |  |  |
| **4-5** |  |  |
| **4-6** |  |  |
| **5-1** |  |  |
| **5-2** |  |  |
| **5-3** |  |  |
| **5-4** |  |  |
| **5-5** |  |  |
| **5-6** |  |  |

***Figure S2*** Optical images of the first five groups of samples before and after chromic acid cleaning as captured by the table-top scanner.

***Table S2*** Commercial names of tested dissolution modulators, and their corresponding CAS number, concentration, inhibition efficiency, inhibition power, symmetrized inhibition efficiency calculated by profilometric weight loss and pitting factor ((IE-P, IEsym-P, and IP-P,), PF). (Red: accelerator, IE < -40%; green: inhibitor, IE > 50%). The initial pH of all solutions was adjusted to 7.0 ± 0.5. The room temperature of the airconditioned lab during the immersion was 22 ± 2 ℃ and the humidity was 75 ± 5%. The average value and standard deviation are based on four replicates measurements for most results and three parallel measurements for few results.

| Concentration (mM) | Dissolution modulator | Structure | CAS number | IE-P (%) | IEsym-P (%) | IP-P | PF |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Dissolution modulators for validation** | | | | | | | |
| 50 | **Benzotriazole** | Benzotriazole ReagentPlus&#174;, 99% | 95-14-7 | -107 ± 16 | -52 ± 4 | -3.17 ± 0.35 | 30.0 ± 7.0 |
| 50 | 3,5-Dimethylpyrazole | 3,5-Dimethylpyrazole 99% | 67-51-6 | -24 ± 30 | -19 ± 20 | -0.93 ± 1.05 | 19.1 ± 5.9 |
| 50 | **1,2,4-Triazole** | 1,2,4-Triazole 98% | 288-88-0 | -283 ± 21 | -74 ± 1 | -5.83 ± 0.21 | 17.9 ± 5.4 |
| 50 | **Hexamethyleneteramine** | Hexamethylenetetramine ACS reagent, &#8805;99.0% | 100-97-0 | -52 ± 35 | -34 ± 14 | -1.82 ± 0.94 | 20.3 ± 4.8 |
| 50 | **5,5-Dimethylhydantoin** | 5,5-Dimethylhydantoin 97% | 77-71-4 | -312 ± 22 | -76 ± 1 | -6.15 ± 0.22 | 18.7 ± 1.2 |
| 50 | Piperazine | Piperazine ReagentPlus&#174;, 99% | 110-85-0 | -34 ± 10 | -25 ± 5 | -1.27 ± 0.31 | 17.4 ± 3.5 |
| 50 | 4-Isopropylbenzoic acid | A chemical structure with black text  Description automatically generated | 536-66-3 | 14 ± 7 | 14 ± 7 | 0.64 ± 0.37 | 21.7 ± 7.5 |
| 50 | 4-Tert-butylbenzoic acid | A chemical structure with black text  Description automatically generated | 98-73-7 | 0 ± 19 | 0 ± 19 | 0 ± 0.87 | 25.0 ± 7.3 |
| 50 | **3-Methyl-2-nitrobenzoic acid** | A chemical structure with letters and numbers  Description automatically generated | 5437-38-7 | -248 ± 25 | -71 ± 2 | -5.42 ± 0.31 | 6.8 ± 1.7 |
| saturated | 2'-Hydroxy-4'-methoxyaceto-phenone | 2&#8242;-Hydroxy-4&#8242;-methoxyacetophenone 99% | 552-41-0 | 23 ± 19 | 23 ± 19 | 1.16 ± 1.19 | 21.6 ± 3.1 |
| 50 | Mandelic acid | A structure of a chemical formula  Description automatically generated | 90-64-2 | 11 ± 19 | 11 ± 19 | 0.49 ± 0.95 | 25.7 ± 5.8 |
| saturated | 1-Pheny-1,3-butanedione | 1-Phenyl-1,3-butanedione 99% | 93-91-4 | -6 ± 22 | -6 ± 21 | -0.26 ± 1.01 | 26.6 ± 9.2 |
| saturated | **Maltol** | Maltol &#8805;99.0%, FCC, FG | 118-71-8 | -155 ± 4 | -61 ± 1 | -4.06 ± 0.07 | 20.4 ± 15.6 |
| 50 | Glycolic acid | A chemical structure with letters and numbers  Description automatically generated | 79-14-1 | 33 ± 10 | 33 ± 10 | 1.71 ± 0.64 | 31.2 ± 3.4 |
| 50 | Oxalic acid | A black background with a black square  Description automatically generated with medium confidence | 144-62-7 | 32 ± 16 | 32 ± 16 | 1.67 ± 0.98 | 20.1 ± 3.4 |
| 50 | **Lactic acid** | A chemical structure with letters and numbers  Description automatically generated | 50-21-5 | -57 ± 17 | -36 ± 7 | -1.97 ± 0.48 | 23.0 ± 7.3 |
| 50 | Maleic acid | A black line drawing of a face  Description automatically generated | 203-742-5 | -1 ± 35 | -1 ± 30 | -0.02 ± 0.58 | 14.9 ± 3.0 |
| 50 | Malonic acid | A black line drawing of two people  Description automatically generated | 141-82-2 | 5 ± 24 | 5 ± 23 | 0.24 ± 1.19 | 18.8 ± 4.7 |
| 50 | Succinic acid | A structure of a chemical formula  Description automatically generated | 110-15-6 | -7 ± 34 | -6 ± 27 | -0.28 ± 1.43 | 22.7 ± 6.8 |
| 50 | Alginic acid sodium salt from brown algae | A chemical structure with black letters and numbers  Description automatically generated | 9005-32-7 | 41 ± 6 | 41 ± 6 | 2.27 ± 0.46 | 43.3 ± 6.0 |
| Saturated | Chitosan | Chitosan low molecular weight | 9012-76-4 | 18 ± 2 | 18 ± 2 | 0.88 ± 0.11 | 23.6 ± 6.3 |
| 50 | Dextran | Dextran - Wikipedia | 9004-54-0 | 26 ± 12 | 26 ± 12 | 1.32 ± 0.75 | 25.4 ± 1.7 |
| 50 | Penicillin G Na salt | Penicillin G sodium salt powder, BioReagent, suitable for cell culture | 69-57-8 | -39 ± 25 | -28 ± 13 | -1.44 ± 0.78 | 40.4 ± 2.4 |
| 50 | Folic acid | A black background with a black square  Description automatically generated with medium confidence | 59-30-3 | -3 ± 20 | -3 ± 18 | -0.14 ± 0.86 | 23.0 ± 7.3 |
| **All dissolution modulators** | | | | | | | |
| 3.5 wt. % | Sodium chloride (NaCl) |  | 7647-14-5 |  |  |  | 19.7 ± 5.2 |
| 50 | Glycolic acid | A chemical structure with letters and numbers  Description automatically generated | 79-14-1 | 33 ± 10 | 33 ± 10 | 1.71 ± 0.64 | 31.2 ± 3.4 |
| 50 | Oxalic acid | A black background with a black square  Description automatically generated with medium confidence | 144-62-7 | 32 ± 16 | 32 ± 16 | 1.67 ± 0.98 | 20.1 ± 3.4 |
| 50 | **Lactic acid** | A chemical structure with letters and numbers  Description automatically generated | 50-21-5 | -57 ± 17 | -36 ± 7 | -1.97 ± 0.48 | 23.0 ± 7.3 |
| 50 | Maleic acid | A black line drawing of a face  Description automatically generated | 203-742-5 | -1 ± 35 | -1 ± 30 | -0.02 ± 1.58 | 14.9 ± 3.0 |
| 50 | Malonic acid | A black line drawing of two people  Description automatically generated | 141-82-2 | 5 ± 24 | 5 ± 23 | 0.24 ± 1.19 | 18.8 ± 4.7 |
| 50 | Itaconic acid | A chemical structure with letters and numbers  Description automatically generated | 97-65-4 | 12 ± 14 | 12 ± 14 | 0.54 ± 0.70 | 17.4 ± 3.6 |
| 50 | Succinic acid | A structure of a chemical formula  Description automatically generated | 110-15-6 | -7 ± 34 | -6 ± 27 | -0.28 ± 1.43 | 22.7 ± 6.8 |
| 50 | Sodium formate | Sodium formate ACS reagent, &#8805;99.0% | 141-53-7 | 32 ± 6 | 32 ± 6 | 1.7 ± 0.42 | 21.8 ± 1.1 |
| 50 | Dimethylolpropionic acid | A chemical structure with letters and numbers  Description automatically generated | 4767-03-7 | 37 ± 8 | 37 ± 8 | 2.03 ± 0.59 | 23.3 ± 4.4 |
| 50 | Diglycolic acid | A black and white structure with a black circle  Description automatically generated with medium confidence | 110-99-6 | 22 ± 8 | 22 ± 8 | 1.1 ± 0.41 | 21.6 ± 8.0 |
| 50 | Citraconic acid | A chemical structure with letters and numbers  Description automatically generated | 498-23-7 | 29 ± 10 | 29 ± 10 | 1.51 ± 0.60 | 17.1 ± 4.5 |
| 50 | Acetic acid | A molecule of a chemical structure  Description automatically generated with medium confidence | 64-19-7 | 21 ± 14 | 21 ± 14 | 1 ± 0.78 | 21.2 ± 4.1 |
| 50 | **Citric acid** | A chemical structure with letters and numbers  Description automatically generated | 77-92-9 | -279 ± 32 | -74 ± 5 | -5.79 ± 0.35 | 20.4 ± 1.5 |
| 50 | Tartaric acid, (L-(+)-Tartaric acid | A structure of a chemical formula  Description automatically generated | 87-69-4 | 48 ± 17 | 48 ± 17 | 2.86 ± 1.60 | 33.3 ± 7.2 |
| saturated | Stearic acid sodium salt | Sodium stearate &#8805;99% | 822-16-2 | -37 ± 11 | -27 ± 6 | -1.36 ± 0.35 | 8.8 ± 0.9 |
| 50 | **Fumaric acid** | A black background with a black square  Description automatically generated with medium confidence | 110-17-8 | 58 ± 7 | 58 ± 7 | 3.75 ± 0.71 | 41.7 ± 17.4 |
| 50 | Malic acid | A structure of a chemical formula  Description automatically generated | 6915-15-7 | 39 ± 27 | 39 ± 27 | 2.13 ± 2.63 | 26.3 ± 7.2 |
| 50 | Potassium oxalate monohydrate | Potassium oxalate monohydrate ACS reagent, 99% | 6487-48-5 | 47 ± 9 | 47 ± 9 | 2.78 ± 0.76 | 24.4 ± 8.3 |
| 50 | Potassium L-tartrate monobasic | Potassium L-tartrate monobasic 99% | 868-14-4 | 32 ± 15 | 32 ± 15 | 1.66 ± 0.86 | 27.0 ± 7.6 |
| 50 | Sodium citrate tribasic dihydrate | Sodium citrate tribasic dihydrate ACS reagent, &#8805;99.0% | 6132-04-3 | 47 ± 7 | 47 ± 7 | 2.72 ± 0.52 | 20.3 ± 11.2 |
| 50 | 1,2,3,4-Butanetetracarboxylic acid | A structure of a chemical formula  Description automatically generated | 1703-58-8 | 33 ± 9 | 33 ± 9 | 1.71 ± 0.61 | 28.8 ± 5.5 |
| 50 | Tricarballylic acid | A chemical structure with letters and numbers  Description automatically generated | 99-14-9 | -19 ± 7 | -16 ± 5 | -0.75 ± 0.26 | 21.0 ± 7.3 |
| 50 | Tartronic acid | A molecule of a chemical structure  Description automatically generated with medium confidence | 80-69-3 | 15 ± 13 | 15 ± 13 | 0.73 ± 0.66 | 16.0 ± 3.2 |
| 50 | Adipic acid | A black line on a white background  Description automatically generated | 124-04-9 | -13 ± 22 | -12 ± 15 | -0.55 ± 0.79 | 22.4 ± 3.6 |
| 50 | Ascorbic acid | A chemical structure with letters and numbers  Description automatically generated | 50-81-7 | -29 ± 11 | -22 ± 6 | -1.1 ± 0.37 | 19.9 ± 2.8 |
| 50 | Cyclohexaneacetic acid | A structure of a chemical compound  Description automatically generated | 5292-21-7 | 1 ± 7 | 1 ± 7 | 0.05 ± 0.33 | 21.9 ± 4.1 |
| 50 | Quinic acid | A black background with a black square  Description automatically generated with medium confidence | 77-95-2 | 26 ± 9 | 26 ± 9 | 1.29 ± 0.51 | 18.5 ± 3.0 |
| 50 | Cyclohexanemethanol | Cyclohexanemethanol ReagentPlus&#174;, &#8805;99% | 100-49-2 | 15 ± 21 | 15 ± 21 | 0.7 ± 1.12 | 21.0 ± 2.2 |
| 50 | D-Pinitol | A chemical structure with black text  Description automatically generated | 10284-63-6 | -10 ± 10 | -9 ± 8 | -0.41 ± 0.38 | 20.1 ± 3.5 |
| 50 | **Tetrahydrofuran** | A black hexagon with a circle  Description automatically generated | 109-99-9 | -46 ± 32 | -32 ± 17 | -1.65 ± 0.99 | 22.3 ± 4.8 |
| 50 | D-(+)-Galactose | A structure of a chemical formula  Description automatically generated | 59-23-4 | 4 ± 21 | 4 ± 21 | 0.16 ± 1.06 | 21.2 ± 6.1 |
| 50 | Glucose | A structure of a chemical formula  Description automatically generated | 50-99-7 | 3 ± 19 | 3 ± 19 | 0.13 ± 0.85 | 24.6 ± 2.8 |
| 50 | β-Lactose | A chemical structure with letters and numbers  Description automatically generated | 5965-66-2 | -15 ± 6 | -13 ± 5 | -0.63 ± 0.24 | 17.4 ± 0.7 |
| 50 | Lactobionic acid | A chemical formula of a molecule  Description automatically generated | 96-82-2 | 40 ± 3 | 40 ± 3 | 2.21 ± 0.24 | 29.2 ± 3.1 |
| 50 | Alginic acid sodium salt from brown algae | A chemical structure with black letters and numbers  Description automatically generated | 9005-32-7 | 41 ± 6 | 41 ± 6 | 2.27 ± 0.46 | 43.3 ± 6.0 |
| 50 | Dextran | Dextran - Wikipedia | 9004-54-0 | 26 ± 12 | 26 ± 12 | 1.32 ± 0.75 | 25.4 ± 1.7 |
| 50 | Benzoic acid | A black and white drawing of a molecule  Description automatically generated | 65-85-0 | 23 ± 6 | 23 ± 6 | 1.16 ± 0.34 | 19.7 ± 4.0 |
| 50 | Phthalic acid | A chemical structure of a molecule  Description automatically generated | 88-99-3 | 9 ± 13 | 9 ± 13 | 0.42 ± 0.64 | 19.0 ± 4.5 |
| 50 | Terephthalic acid | A black and white drawing of a molecule  Description automatically generated | 100-21-0 | 46 ± 21 | 46 ± 21 | 2.67 ± 2.00 | 20.1 ± 3.4 |
| 50 | 1,2,3-Benzenetricarboxylic acid hydrate | A chemical structure with black text  Description automatically generated | 732304-21-1 | 32 ± 18 | 32 ± 18 | 2.66 ± 0.32 | 17.0 ± 4.7 |
| 50 | **1,2,4-Benzenetricarboxylic acid** | A black and white drawing of a molecule  Description automatically generated | 528-44-9 | 63 ± 6 | 63 ± 6 | 4.31 ± 0.72 | 22.5 ± 9.3 |
| 50 | Trimesic acid | A chemical structure with letters and numbers  Description automatically generated | 554-95-0 | 49 ± 12 | 49 ± 12 | 2.94 ± 1.10 | 34.1 ± 12.2 |
| 50 | **1,2,4,5-Benzenetetracarboxylic acid** | A structure of a chemical formula  Description automatically generated | 89-05-4 | 53 ± 3 | 53 ± 3 | 3.28 ± 0.25 | 42.2 ± 11.9 |
| 50 | Mellitic acid | A chemical structure with hexagons  Description automatically generated | 517-60-2 | 19 ± 15 | 19 ± 15 | 0.91 ± 0.80 | 27.3 ± 5.8 |
| 50 | p-Toluic acid | A black hexagon shaped object  Description automatically generated | 99-94-5 | 4 ± 16 | 4 ± 16 | 0.17 ± 0.67 | 18.5 ± 3.4 |
| 50 | 4-Isopropylbenzoic acid | A chemical structure with black text  Description automatically generated | 536-66-3 | 14 ± 7 | 14 ± 7 | 0.64 ± 0.37 | 26.8 ± 6.8 |
| 50 | 4-Tert-butylbenzoic acid | A chemical structure with black text  Description automatically generated | 98-73-7 | 0 ± 19 | 0 ± 19 | 0 ± 0.87 | 25.0 ± 7.3 |
| 50 | Salicylic acid | A chemical structure with letters and numbers  Description automatically generated | 69-72-7 | 26 ± 31 | 26 ± 31 | 1.30 ± 1.87 | 23.9 ± 10.4 |
| 50 | **3-Hydroxybenzoic acid** | A black and white image of a molecule  Description automatically generated | 99-06-9 | -79 ± 27 | -44 ± 8 | -2.54 ± 0.63 | 23.9 ± 2.0 |
| 50 | **4-Hydroxybenzoic acid** | A black hexagon shaped object  Description automatically generated | 99-96-7 | -118 ± 16 | -54 ± 3 | -3.38 ± 0.33 | 16.2 ± 2.5 |
| 50 | **3,4-Dihydroxybenzoic acid** | A chemical structure with letters and numbers  Description automatically generated | 99-50-3 | -131 ± 10 | -57 ± 2 | -3.63 ± 0.19 | 14.7 ± 0.9 |
| saturated | 4-Hydroxy-3,5-dimethoxybenzoic acid | A chemical structure with letters and numbers  Description automatically generated | 530-57-4 | 12 ± 12 | 12 ± 12 | 0.53 ± 0.58 | 13.7 ± 2.5 |
| 50 | **3-Methylsalicylic acid** | A chemical structure with letters and numbers  Description automatically generated | 83-40-9 | 55 ± 3 | 55 ± 3 | 3.50 ± 0.27 | 38.5 ± 12.0 |
| 50 | **4-Methylsalicylic acid** | A chemical structure with letters and numbers  Description automatically generated | 50-85-1 | 51 ± 18 | 51 ± 18 | 3.07 ± 1.77 | 25.4 ± 5.9 |
| 50 | **5-Methylsalicylic acid** | A chemical structure with letters and numbers  Description automatically generated | 89-56-5 | 61 ± 6 | 61 ± 6 | 4.13 ± 0.71 | 27.4 ± 2.6 |
| 50 | Mandelic acid | A chemical structure with letters and numbers  Description automatically generated | 90-64-2 | 11 ± 19 | 11 ± 19 | 0.49 ± 0.95 | 25.7 ± 5.8 |
| 50 | p-Phenylenediacetic acid | A black and white drawing of a molecule  Description automatically generated | 7325-46-4 | 6 ± 6 | 6 ± 6 | 0.28 ± 0.29 | 23.5 ± 3.8 |
| 50 | **3-Methylcinnamic acid** | A structure of a chemical formula  Description automatically generated | 3029-79-6 | 52 ± 15 | 52 ± 15 | 3.17 ± 1.56 | 24.2 ± 19.2 |
| 50 | 3,5-Dimethylphenylacetic acid | A structure of a chemical formula  Description automatically generated | 42288-46-0 | 17 ± 14 | 17 ± 14 | 0.83 ± 0.72 | 21.1 ± 3.4 |
| 50 | 3,5-Dimethoxyphenylacetic acid | No-Image | 4670-10-4 | 8 ± 8 | 8 ± 8 | 0.37 ± 0.36 | 10.9 ± 2.3 |
| saturated | 3,5-Dimethoxybenzyl Alcohol | No-Image | 705-76-0 | -10 ± 21 | -9 ± 17 | -0.42 ± 0.82 | 10.6 ± 2.1 |
| 50 | 2,4-Dimethoxybenzyl alcohol | 2,4-Dimethoxybenzyl alcohol 99% | 7314-44-5 | -13 ± 22 | -11 ± 19 | -0.52 ± 0.92 | 13.9 ± 4.4 |
| 50 | DL-4-Hydroxy-3-methoxymandelic acid | A chemical structure with black lines  Description automatically generated | 55-10-7 | 0 ± 14 | 0 ± 13 | -0.01 ± 0.61 | 19.4 ± 3.0 |
| saturated | 1-Pheny-1,3-butanedione | 1-Phenyl-1,3-butanedione 99% | 93-91-4 | -6 ± 22 | -6 ± 21 | -0.26 ± 1.01 | 26.6 ± 9.2 |
| Saturated | Dimethyl 5-hydroxyisophthalate | A chemical structure with black text  Description automatically generated | 235-899-0 | 8 ± 20 | 8 ± 19 | 0.37 ± 0.96 | 26.5 ± 4.0 |
| saturated | 2'-Hydroxy-4'-methoxyaceto-phenone | 2&#8242;-Hydroxy-4&#8242;-methoxyacetophenone 99% | 552-41-0 | 23 ± 19 | 23 ± 19 | 1.16 ± 1.19 | 21.6 ± 3.1 |
| saturated | n-Octyl gallate | A chemical structure with letters and numbers  Description automatically generated | 1034-01-1 | 33 ± 10 | 33 ± 10 | 1.76 ± 0.62 | 24.9 ± 5.4 |
| Saturated | 2,6-Bis(hydroxymethyl)-p-cresol | A chemical structure with letters and numbers  Description automatically generated | 91-04-3 | -17 ± 21 | -15 ± 14 | -0.69 ± 0.74 | 17.8 ± 2.4 |
| saturated | 2-Hydroxy-1,4-Naphtoquinone | A chemical structure with black lines  Description automatically generated | 83-72-7 | 14 ± 18 | 14 ± 18 | 0.64 ± 0.86 | 32.7 ± 8.5 |
| 50 | Salicylaldehyde | A chemical structure with letters and numbers  Description automatically generated | 90-02-8 | 30 ± 8 | 30 ± 8 | 1.55 ± 0.48 | 35.5 ± 7.0 |
| 50 | Trans-cinnamaldehyde | A molecule of a chemical structure  Description automatically generated with medium confidence | 14371-10-9 | 27 ± 18 | 27 ± 18 | 1.34 ± 1.13 | 26.0 ± 6.2 |
| 50 | **(R)-(−)-Glycidyl benzyl ether** | A black line drawing of a molecule  Description automatically generated | 14618-80-5 | -72 ± 20 | -42 ± 8 | -2.36 ± 0.53 | 17.5 ± 3.1 |
| 50 | (S)-(+)-Glycidyl benzyl ether | A black line drawing of a molecule  Description automatically generated | 16495-13-9 | -19 ± 11 | -16 ± 8 | -0.77 ± 0.42 | 21.3 ± 0.8 |
| 50 | Tannic acid | A black and white image of a molecule  Description automatically generated | 1401-55-4 | -28 ± 11 | -22 ± 7 | -1.06 ± 0.38 | 17.7 ± 3.7 |
| saturated | **Maltol** | A chemical structure with letters and numbers  Description automatically generated | 118-71-8 | -155 ± 4 | -61 ± 1 | -4.06 ± 0.07 | 20.4 ± 15.9 |
| 50 | **Kojic acid** | A black chemical structure with lines  Description automatically generated with medium confidence | 501-30-4 | -54 ± 39 | -35 ± 17 | -1.88 ± 1.09 | 14.4 ± 1.1 |
| 50 | Furylacrylic acid | 2-呋喃丙烯酸, 539-47-9, 结构式 | 539-47-9 | 4 ± 28 | 4 ± 24 | 0.17 ± 1.23 | 20.1 ± 1.9 |
| 50 | **2-Nitrobenzoic acid** | A chemical structure with letters and numbers  Description automatically generated | 552-16-9 | -95 ± 27 | -49 ± 8 | -2.89 ± 0.61 | 15.0 ± 1.9 |
| 50 | **3-Methyl-2-nitrobenzoic acid** | A chemical structure with letters and numbers  Description automatically generated | 5437-38-7 | -248 ± 25 | -71 ± 21 | -5.42 ± 0.31 | 6.8 ± 1.7 |
| 50 | 2-Nitroterephthalic acid | A chemical structure with black text  Description automatically generated | 610-29-7 | -17 ± 28 | -14 ± 25 | -0.68 ± 1.11 | 29.6 ± 9.2 |
| 50 | 3-Nitrophthalic acid | A chemical structure with letters and numbers  Description automatically generated | 603-11-2 | -25 ± 29 | -20 ± 20 | -0.97 ± 1.05 | 21.4 ± 3.6 |
| 50 | 4-Nitrophthalic acid | A chemical structure with letters and numbers  Description automatically generated | 610-27-5 | 17 ± 38 | 17 ± 34 | 0.81 ± 1.92 | 32.7 ± 10.4 |
| saturated | 3-Nitrosalicylic acid | A chemical structure with letters and numbers  Description automatically generated | 85-38-1 | -1 ± 18 | -1 ± 15 | -0.05 ± 0.73 | 24.1 ± 4.5 |
| 50 | 3-Hydroxy-4-nitrobenzoic acid | A structure of a chemical formula  Description automatically generated | 619-14-7 | -17 ± 44 | -14 ± 33 | -0.67 ± 1.75 | 28.8 ± 8.0 |
| saturated | 3,5-Dinitrosalicylic acid | A chemical structure with letters and numbers  Description automatically generated | 609-99-4 | 16 ± 28 | 16 ± 28 | 0.75 ± 1.53 | 29.5 ± 4.1 |
| 50 | **4-Aminosalicylic acid** | A structure of a chemical formula  Description automatically generated | 65-49-6 | 55 ± 2 | 55 ± 2 | 3.50 ± 0.17 | 20.3 ± 5.3 |
| saturated | **5-Aminosalicylic acid** | Mesalamine Pharmaceutical Secondary Standard; Certified Reference Material | 89-57-6 | 63 ± 9 | 63 ± 9 | 4.35 ± 1.25 | 28.2 ± 7.6 |
| 50 | **3-Amino-4Hydroxybenzoic acid** | A chemical structure with black text  Description automatically generated | 1571-72-8 | -78 ± 17 | -44 ± 5 | -2.50 ± 0.39 | 24.9 ± 2.6 |
| 50 | **2-Amino-5-methylbenzoic acid** | A chemical structure with black text  Description automatically generated | 2941-78-8 | 50 ± 15 | 50 ± 15 | 3.05 ± 1.26 | 37.3 ± 10.7 |
| 50 | 2-Aminoterephthalic acid | A chemical structure with black text  Description automatically generated | 10312-55-7 | 32 ± 17 | 32 ± 17 | 1.68 ± 1.12 | 24.1 ± 9.2 |
| 50 | 5-Aminoisophthalic acid | A chemical structure with letters and numbers  Description automatically generated | 99-31-0 | 37 ± 22 | 37 ± 22 | 2.04 ± 1.55 | 24.4 ± 12.6 |
| 50 | Pyrazinecarboxylic acid | A chemical structure with black letters  Description automatically generated | 98-97-5 | 5 ± 3 | 5 ± 3 | 0.23 ± 0.14 | 18.7 ± 3.4 |
| Saturated | 2,5-Pyrazinedicarboxylic acid dihydrate | A chemical structure with black letters  Description automatically generated | 205692-63-3 | -26 ± 37 | -21 ± 26 | -1 ± 1.37 | 24.1 ± 5.0 |
| 50 | 2-Picolinic acid | A chemical structure with letters and numbers  Description automatically generated | 98-98-6 | 19 ± 11 | 19 ± 11 | 0.92 ± 0.59 | 14.5 ± 2.4 |
| 50 | Nicotinic acid | A chemical structure with letters and numbers  Description automatically generated | 59-67-6 | 25 ± 13 | 25 ± 13 | 1.22 ± 0.75 | 32.9 ± 4.1 |
| 50 | **3-(Pyridin-4-yl)acrylic acid** | A structure of a chemical formula  Description automatically generated | 5337-79-1 | -55 ± 29 | -36 ± 12 | -1.91 ± 0.81 | 17.4 ± 4.0 |
| 50 | trans-3-(3-Pyridyl)acrylic acid | A chemical structure with letters and numbers  Description automatically generated | 19337-97-4 | 21 ± 12 | 21 ± 12 | 1.03 ± 0.64 | 23.7 ± 7.4 |
| 50 | 2-Aminopyridine-3-carboxylic acid | A chemical structure with letters and numbers  Description automatically generated | 5345-47-1 | -28 ± 24 | -22 ± 13 | -1.08 ± 0.76 | 21.6 ± 8.0 |
| 50 | 2,3-Pyridinedicarboxylic acid | 2,3-Pyridinedicarboxylic acid 99% | 89-00-9 | 34 ± 22 | 34 ± 22 | 1.81 ± 1.67 | 17.9 ± 6.2 |
| 50 | **2,5-Pyridinedicarboxylic acid** | A chemical structure with black letters  Description automatically generated | 100-26-5 | 51 ± 7 | 51 ± 7 | 3.11 ± 0.61 | 27.2 ± 3.7 |
| 50 | 2,6-Pyridinedicarboxylic acid | A black and white structure with black letters and numbers  Description automatically generated | 499-83-2 | 33 ± 18 | 33 ± 18 | 1.71 ± 1.14 | 14.5 ± 3.1 |
| 50 | Dimethyl 2,6-pyridinedicarboxylate | Dimethyl 2,6-pyridinedicarboxylate 99% | 5453-67-8 | -4 ± 22 | -4 ± 20 | -0.17 ± 0.95 | 21.0 ± 3.3 |
| 50 | 3,4-Pyridinedicarboxylic acid | A chemical structure with letters and numbers  Description automatically generated | 490-11-9 | 46 ± 17 | 46 ± 17 | 2.67 ± 1.21 | 20.7 ± 10.0 |
| saturated | 2-2-Bipyridine-4-4-dicarboxylic acid | A molecule of a chemical structure  Description automatically generated with medium confidence | 6813-38-3 | 11 ± 12 | 11 ± 12 | 0.48 ± 0.58 | 35.6 ± 5.5 |
| 50 | **CyDTA /trans-12-diamino** | A chemical structure with black text  Description automatically generated | 125572-95-4 | -179 ± 24 | -64 ± 3 | -4.45 ± 0.38 | 4.3 ± 0.4 |
| 50 | Folic acid | A chemical structure with black lines  Description automatically generated | 59-30-3 | -3 ± 20 | -3 ± 18 | -0.14 ± 0.86 | 23.0 ± 7.3 |
| saturated | **α-Cyano-3-hydroxycinnamic acid** | A chemical structure with black text  Description automatically generated | 28166-41-8 | -103 ± 36 | -51 ± 9 | -3.07 ± 0.77 | 24.5 ± 4.0 |
| 50 | **Salicylaldoxime** | Salicylaldoxime &#8805;98.0% (NT) | 94-67-7 | -58 ± 27 | -37 ± 14 | -1.99 ± 0.71 | 30.0 ± 9.2 |
| 50 | **Salicylhydroxamic acid** | A chemical structure with letters and numbers  Description automatically generated | 89-73-6 | -54 ± 19 | -35 ± 8 | -1.87 ± 0.54 | 11.7 ± 1.8 |
| 50 | Quinaldic acid | A black chemical structure with letters and numbers  Description automatically generated | 93-10-7 | -6 ± 20 | -5 ± 16 | -0.24 ± 0.80 | 35.2 ± 9.3 |
| Saturated | Chitosan | Chitosan low molecular weight | 9012-76-4 | 18 ± 2 | 18 ± 2 | 0.88 ± 0.11 | 23.6 ± 6.3 |
| 50 | **Ethylenediamine** | Ethylenediamine ReagentPlus&#174;, &#8805;99% | 107-15-3 | -454 ± 22 | -82 ± 1 | -7.43 ± 0.17 | 11.6 ± 1.0 |
| 50 | **L-Asparagine** | L-Asparagine &#8805;98% (HPLC) | 70-47-3 | -124 ± 30 | -55 ± 6 | -3.5 ± 0.56 | 15.1 ± 0.8 |
| 50 | **Ethylenediaminetetraacetic acid (EDTA)** | A structure of a chemical formula  Description automatically generated | 60-00-4 | -205 ± 15 | -67 ± 2 | -4.85 ± 0.22 | 3.6 ± 0.4 |
| 50 | Urea | Urea ACS reagent, 99.0-100.5% | 57-13-6 | 2 ± 26 | 2 ± 26 | 0.07 ± 1.06 | 23.3 ± 2.6 |
| 50 | Acetamide | Acetamide ~99% (GC) | 60-35-5 | -29 ± 25 | -22 ± 14 | -1.09 ± 0.81 | 20.5 ± 7.4 |
| 50 | N-Lauroylsarcosine Na | N-Lauroylsarcosine sodium salt detergent for use in cell lysis | 137-16-6 | 22 ± 12 | 22 ± 12 | 1.1 ± 0.72 | 27.8 ± 7.6 |
| 50 | **Glycyl-glycine** | Gly-Gly &#8805;99% (titration) | 556-50-3 | -164 ± 31 | -62 ± 8 | -4.21 ± 0.51 | 17.0 ± 2.9 |
| 50 | **L-Ornithine hydrochloride** | L-Ornithine monohydrochloride &#8805;99% | 3184-13-2 | -266 ± 40 | -73 ± 4 | -5.64 ± 0.50 | 13.9 ± 1.4 |
| 50 | **Aspartic acid** | A structure of a chemical formula  Description automatically generated | 56-84-8 | -76 ± 7 | -43 ± 2 | -2.46 ± 0.18 | 14.0 ± 1.7 |
| 50 | **5,5-Dimethylhydantoin** | 5,5-Dimethylhydantoin 97% | 77-71-4 | -312 ± 22 | -76 ± 1 | -6.15 ± 0.22 | 18.7 ± 1.2 |
| 50 | **Diethylenetriaminepentaacetic acid** | A chemical structure with letters and numbers  Description automatically generated | 67-43-6 | -270 ± 15 | -73 ± 1 | -5.68 ± 0.17 | 4.7 ± 0.2 |
| 50 | **L-Cysteine** | L-Cysteine 97% | 52-90-4 | -84 ± 14 | -46 ± 4 | -2.64 ± 0.32 | 13.9 ± 1.5 |
| 50 | **N-(2-Trisodium (2-hydroxyethyl)ethylenediaminetriacetate** | A structure of a chemical formula  Description automatically generated | 139-89-9 | -155 ± 7 | -61 ± 1 | -4.06 ± 0.11 | 5.6 ± 1.0 |
| 50 | **2,2′-(Ethylenedioxy)bis(ethylamine)** | 2,2&#8242;-(Ethylenedioxy)bis(ethylamine) 98% | 929-59-9 | -200 ± 11 | -67 ± 1 | -4.77 ± 0.15 | 12.9 ± 2.2 |
| 50 | **Glycine** | Glycine ReagentPlus&#174;, &#8805;99% (HPLC) | 56-40-6 | -155 ± 30 | -61 ± 4 | -4.07 ± 0.49 | 18.1 ± 2.9 |
| 50 | **Lysine** | L-Lysine &#8805;98% (TLC) | 56-87-1 | -139 ± 34 | -58 ± 6 | -3.79 ± 0.61 | 14.4 ± 3.2 |
| 50 | **Iminodiacetic acid** | A chemical formula with black letters  Description automatically generated | 142-73-4 | -149 ± 22 | -60 ± 4 | -3.95 ± 0.39 | 5.8 ± 3.0 |
| 50 | **N-(2-Hydroxyethyl)iminodiacetic acid** | A structure of a chemical formula  Description automatically generated | 93-62-9 | -161 ± 48 | -62 ± 7 | -4.17 ± 0.81 | 11.7 ± 0.7 |
| 50 | **2-Amino-2-methyl-1,3-propanediol** | 2-Amino-2-methyl-1,3-propanediol BioUltra, &#8805;99.5% (NT) | 115-69-5 | -271 ± 22 | -73 ± 2 | -5.70 ± 0.26 | 14.8 ± 2.7 |
| 50 | **BIS-TRIS** | BIS-TRIS ULTROL&#174; Grade, &#8805;99% dry basis (titration), suitable where a calcium phosphate-DNA complex formation is desirable | 6976-37-0 | -126 ± 16 | -56 ± 3 | -3.54 ± 0.3 | 19.2 ± 2.4 |
| 50 | **BIS-TRIS propane** | BIS-TRIS propane &#8805;99.0% (titration) | 64431-96-5 | -190 ± 31 | -66 ± 4 | -4.63 ± 0.46 | 14.5 ± 2.6 |
| 50 | **Hexamethyleneteramine** | Hexamethylenetetramine ACS reagent, &#8805;99.0% | 100-97-0 | -52 ± 35 | -34 ± 14 | -1.82 ± 0.94 | 20.3 ± 4.8 |
| 50 | Piperazine | Piperazine ReagentPlus&#174;, 99% | 110-85-0 | -34 ± 10 | -25 ± 5 | -1.27 ± 0.31 | 17.4 ± 3.5 |
| 50 | Pyrazine | Pyrazine &#8805;99% | 290-37-9 | -37 ± 24 | -27 ± 13 | -1.36 ± 0.75 | 10.6 ± 3.0 |
| saturated | **Uracil** | Uracil &#8805;99.0% | 66-22-8 | -113 ± 55 | -53 ± 16 | -3.29 ± 1.26 | 20.6 ± 7.3 |
| 50 | **1-(2-Hydroxyethyl)piperazine** | 1-(2-Hydroxyethyl)piperazine 98% | 103-76-4 | -134 ± 13 | -57 ± 2 | -3.70 ± 0.25 | 13.7 ± 3.1 |
| saturated | 1,10-Phenanthroline monohydrate | 1,10-Phenanthroline &#8805;99% | 66-71-7 | 19 ± 16 | 19 ± 16 | 0.94 ± 0.94 | 28.4 ± 3.7 |
| saturated | 2,2'-Bipyridyl | 2,2&#8242;-Bipyridyl ReagentPlus&#174;, &#8805;99% | 366-18-7 | 27 ± 12 | 27 ± 12 | 1.35 ± 0.65 | 20.1 ± 3.8 |
| saturated | 5-Nitrobarbituric acid trihydrate | A chemical structure with letters and numbers  Description automatically generated | 209529-81-7 | 42 ± 18 | 42 ± 18 | 2.38 ± 1.25 | 36.0 ± 3.9 |
| 50 | Pyrazole | Pyrazole 98% | 288-13-1 | 20 ± 9 | 20 ± 9 | 0.99 ± 0.51 | 20.8 ± 2.5 |
| 50 | **Benzotriazole** | Benzotriazole ReagentPlus&#174;, 99% | 95-14-7 | -107 ± 16 | -52 ± 4 | -3.17 ± 0.35 | 30.0 ± 7.0 |
| 50 | **1,2,4-Triazole** | 1,2,4-Triazole 98% | 288-88-0 | -283 ± 21 | -74 ± 1 | -5.83 ± 0.24 | 17.9 ± 5.4 |
| 50 | 3,5-Dimethylpyrazole | 3,5-Dimethylpyrazole 99% | 67-51-6 | -24 ± 30 | -19 ± 20 | -0.93 ± 1.05 | 19.1 ± 5.9 |
| 50 | **3-Hydroxy-1,2-dimethyl-4(1H)-pyridone** | 3-Hydroxy-1,2-dimethyl-4(1H)-pyridone 98% | 30652-11-0 | -138 ± 15 | -58 ± 3 | -3.76 ± 0.27 | 6.0 ± 1.2 |
| Saturated | 5-Nitro-1,10-phenanthroline | 5-Nitro-1,10-phenanthroline &#8805;97%, crystalline | 4199-88-6 | -6 ± 39 | -6 ± 30 | -0.26 ± 1.61 | 20.1 ± 4.4 |
| 50 | 3,5-Dimethylpyrazole-1-methanol | 3,5-Dimethylpyrazole-1-methanol 99% | 85264-33-1 | 28 ± 19 | 28 ± 19 | 1.41 ± 1.26 | 24.1 ± 5.2 |
| Saturated | 5-Nitrouracil | 5-Nitrouracil | 611-08-5 | 35 ± 11 | 35 ± 11 | 1.87 ± 0.77 | 25.7 ± 4.3 |
| 50 | N,N′-Trimethyleneurea | N,N&#8242;-Trimethyleneurea &#8805;98.0% | 1852-17-1 | 8 ± 10 | 8 ± 10 | 0.38 ± 0.45 | 20.1 ± 2.5 |
| 50 | Benzamide | Benzamide 99% | 55-21-0 | 17 ± 19 | 17 ± 19 | 0.78 ± 0.99 | 24.6 ± 8.9 |
| 50 | 4-Amino-4H-1,2,4-triazole | 4-Amino-4H-1,2,4-triazole ReagentPlus&#174;, 99% | 584-13-4 | -22 ± 11 | -18 ± 8 | -0.87 ± 0.40 | 20.4 ± 2.4 |
| saturated | 8-Hydroxyquinoline | 8-Hydroxyquinoline ACS reagent, 98.5% | 148-24-3 | -14 ± 12 | -12 ± 9 | -0.55 ± 0.46 | 14.7 ± 3.7 |
| 50 | 6-Hydroxyquinoline | 6-Hydroxyquinoline 95% | 580-16-5 | -23 ± 13 | -19 ± 8 | -0.92 ± 0.45 | 23.2 ± 5.1 |
| 50 | **8-Aminoquinoline** | 8-Aminoquinoline 98% | 578-66-5 | -76 ± 21 | -43 ± 6 | -2.45 ± 0.48 | 18.7 ± 6.2 |
| saturated | **5-Aminoisoquinoline** | 5-Aminoisoquinoline 99% | 1125-60-6 | 62 ± 5 | 62 ± 5 | 4.26 ± 0.59 | 22.6 ± 5.3 |
| 50 | 8-Nitroquinoline | 8-Nitroquinoline 98% | 607-35-2 | -3 ± 26 | -3 ± 23 | -0.15 ± 1.13 | 23.1 ± 2.5 |
| 50 | 4-Quinolinol | 4-Quinolinol 98% | 611-36-9 | -23 ± 16 | -18 ± 11 | -0.89 ± 0.57 | 23.3 ± 3.5 |
| saturated | 6-Aminoindole | 6-Aminoindole 97% | 5318-27-4 | 34 ± 7 | 34 ± 7 | 1.79 ± 0.48 | 18.8 ± 0.7 |
| saturated | 5-Aminoindole | 5-Aminoindole 97% | 5192-03-0 | 18 ± 7 | 18 ± 7 | 0.85 ± 0.39 | 16.6 ± 2.5 |
| 50 | 1-Octanethiol | 1-Octanethiol &#8805;98.5% | 111-88-6 | 11 ± 5 | 11 ± 5 | 0.50 ± 0.26 | 19.6 ± 6.8 |
| 50 | 1-Dodecanethiol | 1-Dodecanethiol &#8805;98% | 112-55-0 | 0 ± 24 | 0 ± 20 | 0.01 ± 0.97 | 20.7 ± 6.5 |
| SA50 | 1-Undecanethiol | 1-Undecanethiol 98% | 5332-52-5 | -31 ± 23 | -24 ± 14 | -1.18 ± 0.77 | 25.4 ± 3.2 |
| 50 | 2,2′-Thiodiacetic acid | A black letter s on a white background  Description automatically generated | 123-93-3 | 11 ± 13 | 11 ± 13 | 0.51 ± 0.71 | 22.2 ± 9.0 |
| /50 | 2,2′-(Ethylenedithio)diacetic acid | A structure of a chemical formula  Description automatically generated | 7244-02-2 | 11 ± 5 | 11 ± 5 | 0.49 ± 0.26 | 24.0 ± 12.3 |
| 50 | 4,4′-Dithiodibutyric acid | A structure of a chemical formula  Description automatically generated | 2906-60-7 | 7 ± 22 | 7 ± 22 | 0.31 ± 1.18 | 31.4 ± 11.0 |
| 50 | **Thiourea** | Thiourea ACS reagent, &#8805;99.0% | 62-56-6 | 72 ± 4 | 72 ± 4 | 5.60 ± 0.63 | 25.3 ± 9.8 |
| 50 | **Sodium-2mercaptoethanesulfonate** | Sodium 2-mercaptoethanesulfonate analytical standard, &#8805;98.0% (titration) | 19767-45-4 | -140 ± 26 | -58 ± 5 | -3.80 ± 0.47 | 19.1 ± 15.6 |
| 50 | Taurine | Taurine &#8805;99% | 107-35-7 | -38 ± 26 | -28 ± 12 | -1.40 ± 0.77 | 8.9 ± 9.6 |
| 50 | **N-(2-acetamido)-2-aminoethanesulfonic acid (ACES)** | ACES &#8805;99.0% (titration) | 7365-82-4 | -173 ± 29 | -63 ± 4 | -4.36 ± 0.44 | 17.7 ± 3.0 |
| 50 | Sodium diethyldithiocarbamate | Sodium diethyldithiocarbamate trihydrate ACS reagent | 20624-25-3 | 26 ± 9 | 26 ± 9 | 1.34 ± 0.54 | 22.5 ± 4.3 |
| 50 | **TAPSO** | TAPSO &#8805;99% (titration) | 68399-81-5 | -176 ± 27 | -64 ± 4 | -4.40 ± 0.44 | 22.0 ± 1.6 |
| 50 | **Methionine** | L-Methionine reagent grade, &#8805;98% (HPLC) | 63-68-3 | -106 ± 37 | -52 ± 9 | -3.15 ± 0.79 | 18.9 ± 5.7 |
| 50 | **AMPSO** | AMPSO &#8805;99% (titration) | 68399-79-1 | -150 ± 13 | -60 ± 2 | -3.98 ± 0.23 | 18.0 ± 3.8 |
| 50 | **TAPS** | TAPS &#8805;99.5% (titration) | 29915-38-6 | -92 ± 30 | -48 ± 8 | -2.83 ± 0.65 | 22.6 ± 4.5 |
| 50 | **EPPS** | EPPS &#8805;99.5% (titration) | 16052-06-5 | -154 ± 22 | -61 ± 3 | -4.05 ± 0.37 | 18.4 ± 2.6 |
| 50 | 2-Mercaptopyridine-3-carboxylic acid | A chemical structure with letters and numbers  Description automatically generated | 38521-46-9 | -21 ± 31 | -17 ± 18 | -0.83 ± 1.03 | 29.3 ± 17.4 |
| 50 | **6-Mercaptopyridine-3-carboxylic acid** | A black chemical structure with letters and numbers  Description automatically generated | 92823-43-3 | -88 ± 37 | -47 ± 10 | -2.74 ± 0.82 | 8.6 ± 2.7 |
| saturated | **Sodium dodecylbenzene sulfonate** | Sodium dodecylbenzenesulfonate technical grade | 25155-30-0 | 77 ± 6 | 77 ± 6 | 6.43 ± 1.24 | 37.0 ± 9.3 |
| 50 | Penicillin G Na salt | Penicillin G sodium salt powder, BioReagent, suitable for cell culture | 69-57-8 | -39 ± 25 | -28 ± 13 | -1.44 ± 0.78 | 40.4 ± 2.4 |
| Saturated | **Anthraquinone-2-sulfonic acid sodium salt monohydrate** | A chemical structure with black lines  Description automatically generated | 153277-35-1 | -41 ± 10 | -29 ± 5 | -1.5 ± 0.32 | 10.5 ± 0.8 |
| 50 | **5-Sulfosalicylic acid** | A chemical structure with letters and numbers  Description automatically generated | 5965-83-3 | -79 ± 6 | -44 ± 2 | -2.52 ± 0.14 | 12.3 ± 3.2 |
| 1 | Hydroquinonesulfonic acid potassium salt | A chemical structure with letters and numbers  Description automatically generated | 21799-87-1 | -18 ± 41 | -15 ± 32 | -0.72 ± 1.54 | 8.9 ± 4.3 |
| 50 | 8-Anilino-1-naphthalenesulfonic acid ammonium salt | A black and white diagram of a molecule  Description automatically generated | 28836-03-5 | 12 ± 12 | 12 ± 12 | 0.53 ± 0.58 | 41.7 ± 11.9 |
| saturated | **8-Hydroxy-5-quinoline sulfonic acid** | A chemical formula of a molecule  Description automatically generated | 207386-92-3 | -119 ± 26 | -54 ± 6 | -3.4 ± 0.52 | 9.4 ± 0.9 |
| saturated | **8-Hydroxy-7-iodo-5-quinolinesulfonic acid** | A chemical formula with letters and numbers  Description automatically generated | 547-91-1 | -56 ± 28 | -36 ± 12 | -1.94 ± 0.80 | 17.2 ± 7.9 |
| 50 | **2-(Cyclohexylamino)ethanesulfonic acid (CHES)** | A chemical structure with letters and numbers  Description automatically generated | 103-47-9 | -181 ± 30 | -64 ± 4 | 4.48 ± 0.48 | 18.1 ± 4.0 |
| 50 | 3-Mercaptobenzoic acid | A black and white structure  Description automatically generated with medium confidence | 4869-59-4 | 46 ± 25 | 46 ± 25 | 2.69 ± 1.83 | 33.0 ± 10.3 |
| 50 | 4-Mercaptobenzoic acid | A black chemical structure with black text  Description automatically generated with medium confidence | 1074-36-8 | 32 ± 18 | 32 ± 18 | 1.67 ± 1.17 | 44.8 ± 8.9 |
| 50 | 2-Mercaptobenzoic acid | A chemical structure with letters and numbers  Description automatically generated | 147-93-3 | -7 ± 18 | -7 ± 14 | -0.29 ± 0.68 | 17.3 ± 7.4 |
| 50 | **2,5-Thiophenedicarboxylic acid** | A black and white diagram of a molecule  Description automatically generated | 4282-31-9 | 74 ± 10 | 74 ± 10 | 5.89 ± 1.98 | 32.3 ± 6.6 |
| 50 | 3-(2-Thienyl)acrylic acid | A structure of a chemical formula  Description automatically generated | 15690-25-2 | -8 ± 3 | -7 ± 2 | -0.30 ± 1.12 | 16.4 ± 3.8 |
| 50 | **1,3,4-thiadiazole-2,5-dithiol (DMTD, bismuthiol) salt** | 1,3,4-Thiadiazole-2,5-dithiol 98% | 1072-71-5 | 87 ± 6 | 87 ± 6 | 9.02 ± 2.03 | 5.4 ± 0.9 |
| 50 | **5-Amino-1,3,4-****thiadiazole-2-thiol** | 5-Amino-1,3,4-thiadiazole-2-thiol 95% | 2349-67-9 | 59 ± 8 | 59 ± 8 | 3.90 ± 0.87 | 56.0 ± 4.3 |
| Saturated | 2-Amino-5-trifluoromethyl-1,3,4-thiadiazole | 2-Amino-5-trifluoromethyl-1,3,4-thiadiazole 97% | 10444-89-0 | 48 ± 6 | 48 ± 6 | 2.83 ± 0.52 | 29.2 ± 7.2 |
| 50 | 2,5-Dimethyl-1,3,4-thiadiazole | A structure of a chemical formula  Description automatically generated | 27464-82-0 | -1 ± 12 | -1 ± 12 | -0.05 ± 0.55 | 21.4 ± 1.9 |
| Saturated | 4-Amino-6-mercaptopyrazolo[3,4-d]pyrimidine | A chemical structure with letters and numbers  Description automatically generated | 23771-52-0 | 40 ± 13 | 40 ± 13 | 2.20 ± 0.97 | 28.1 ± 4.2 |
| 50 | 4,5-Diamino-2,6-dimercaptopyrimidine | 4,5-Diamino-2,6-dimercaptopyrimidine technical grade, 90% | 31295-41-7 | 36 ± 21 | 36 ± 21 | 1.96 ± 1.56 | 29.2 ± 4.8 |
| Saturated | 4-Amino-3-hydrazino-5-mercapto-1,2,4-triazole | Purpald&#174; &#8805;99% | 1750-12-5 | 32 ± 10 | 32 ± 10 | 1.66 ± 0.63 | 26.8 ± 3.8 |
| Saturated | 4,6-Diamino-2-pyrimidinethiol | A structure of a chemical formula  Description automatically generated | 1004-39-3 | 28 ± 9 | 28 ± 9 | 1.44 ± 0.49 | 31.1 ± 3.2 |
| 50 | 2,6-Diamino-4-chloropyrimidine | A chemical structure with black letters  Description automatically generated | 156-83-2 | 1 ± 21 | 1 ± 20 | 0.04 ± 0.99 | 28.1 ± 4.7 |
| Saturated | 2-Mercapto-5-methylbenzimidazole | A chemical structure with black text  Description automatically generated | 27231-36-3 | 43 ± 7 | 43 ± 7 | 2.48 ± 0.49 | 34.6 ± 6.4 |
| 50 | 2-Mercapto-1-methylimidazole | A chemical structure with letters and numbers  Description automatically generated | 60-56-0 | -35 ± 15 | -26 ± 9 | -1.32 ± 0.50 | 25.4 ± 9.1 |
| 50 | 2-Mercaptoimidazole | 2-Mercaptoimidazole 98% | 872-35-5 | -5 ± 17 | -5 ± 16 | -0.2 ± 0.75 | 30.5 ± 6.3 |
| 50 | Sodium phosphite | Sodium phosphite dibasic pentahydrate &#8805;98% | 13517-23-2 | 45 ± 3 | 45 ± 3 | 2.63 ± 0.24 | 10.9 ± 1.9 |
| Saturated | (12-Phosphonododecyl)phosphonic acid | A black text with letters and numbers  Description automatically generated | 7450-59-1 | 20 ± 16 | 20 ± 16 | 0.98 ± 0.96 | 24.9 ± 8.0 |
| 50 | **Ethylphosphonic acid** | A chemical structure with letters and numbers  Description automatically generated | 6779-09-5 | -73 ± 13 | -42 ± 5 | -2.37 ± 0.34 | 18.3 ± 0.4 |
| 50 | **Propylphosphonic acid** | A chemical structure with black letters  Description automatically generated | 4672-38-2 | -75 ± 34 | -43 ± 11 | -2.42 ± 0.84 | 22.0 ± 4.5 |
| 50 | Hexylphosphonic acid | A black text on a white background  Description automatically generated | 4721-24-8 | 18 ± 11 | 18 ± 11 | 0.87 ± 0.57 | 32.4 ± 4.5 |
| 50 | Butylphosphonic acid | A chemical formula of a molecule  Description automatically generated with medium confidence | 3321-64-0 | -32 ± 42 | -24 ± 23 | -1.19 ± 1.33 | 25.4 ± 6.9 |
| Saturated | Octylphosphonic acid | A black text on a white background  Description automatically generated | 4724-48-5 | 45 ± 20 | 45 ± 20 | 2.58 ± 1.38 | 23.9 ± 3.8 |
| 50 | Decylphosphonic acid | A black text on a white background  Description automatically generated | 6874-60-8 | 11 ± 23 | 1 ± 22 | 0.52 ± 1.23 | 19.9 ± 5.4 |
| 50 | n-Dodecylphosphonic acid | A grey line on a white background  Description automatically generated | 5137-70-2 | -11 ± 20 | -10 ± 16 | -0.47 ± 0.77 | 20.6 ± 2.8 |
| 50 | Tetradecylphosphonic acid | A black text on a white background  Description automatically generated | 4671-75-4 | -34 ± 17 | -25 ± 11 | -1.26 ± 0.58 | 18.1 ± 4.9 |
| Saturated | **Hexadecylphosphonic acid** | A black text on a white background  Description automatically generated | 4721-17-9 | -45 ± 6 | -31 ± 3 | -1.6 ± 0.19 | 21.1 ± 6.0 |
| Saturated | Octadecylphosphonic acid | A black text on a white background  Description automatically generated | 4724-47-4 | -30 ± 29 | -23 ± 19 | -1.14 ± 0.99 | 22.3 ± 1.7 |
| 50 | **Diethyl cyanomethylphosphonate** | Diethyl cyanomethylphosphonate 98% | 2537-48-6 | -226 ± 43 | -69 ± 4 | -5.14 ± 0.55 | 13.0 ± 1.3 |
| 50 | Diethyl (2-methylallyl) phosphonate | A chemical structure with letters and numbers  Description automatically generated | 51533-70-1 | 5 ± 13 | 5 ± 1 | 0.22 ± 0.57 | 24.1 ± 3.8 |
| 50 | Methylphosphonic acid | A chemical formula with letters and numbers  Description automatically generated | 993-13-5 | -29 ± 33 | -22 ± 24 | -1.1 ± 1.25 | 14.7 ± 3.7 |
| 50 | Diethyl allylphosphonate | Diethyl allylphosphonate 98% | 1067-87-4 | -17 ± 10 | -14 ± 8 | -0.67 ± 0.40 | 11.3 ± 6.2 |
| 50 | **Etidronic acid** | A chemical formula with letters and numbers  Description automatically generated | 2809-21-4 | -94 ± 9 | -49 ± 2 | -2.88 ± 0.20 | 4.3 ± 0.1 |
| 50 | 6-Phosphonohexanoic acid | A black line on a white background  Description automatically generated | 5662-75-9 | -38 ± 11 | -28 ± 6 | -1.4 ± 0.33 | 21.5 ± 5.3 |
| 50 | **Hypophosphorous acid** | A black text with letters  Description automatically generated | 6303-21-5 | -64 ± 11 | -39 ± 4 | -2.16 ± 0.29 | 14.9 ± 3.7 |
| 50 | **Phytic acid** | A black background with a black square  Description automatically generated with medium confidence | 83-86-3 | -108 ± 15 | -52 ± 4 | -3.18 ± 0.32 | 18.2 ± 6.8 |
| 50 | **(3-Bromopropyl) phosphonic acid** | A chemical structure with letters and numbers  Description automatically generated | 1190-09-6 | -115 ± 22 | -53 ± 5 | -3.32 ± 0.46 | 22.3 ± 2.6 |
| 50 | **Diethyl (bromodifluoromethyl) phosphonate** | Diethyl (bromodifluoromethyl)phosphonate 96% | 65094-22-6 | -132 ± 12 | -57 ± 2 | -3.66 ± 0.23 | 22.1 ± 4.2 |
| 50 | **Nitrilotri(methylphosphonic acid)** | A chemical structure with black letters  Description automatically generated | 6419-19-8 | -108 ± 48 | -52 ± 14 | -3.18 ± 1.12 | 13.3 ± 4.8 |
| 50 | **Glyphosine** | N,N-Bis(phosphonomethyl)glycine &#8805;98.0% (T) | 2439-99-8 | -69 ± 33 | -41 ± 14 | -2.27 ± 0.94 | 10.0 ± 1.0 |
| 50 | Phenylphosphonic acid | A chemical structure with letters and numbers  Description automatically generated | 1571-33-1 | -1 ± 15 | -1 ± 13 | -0.06 ± 0.63 | 23.7 ± 3.4 |
| 50 | Heptyltriphenylphosphonium bromide | Heptyltriphenylphosphonium bromide 97% | 13423-48-8 | -29 ± 33 | -22 ± 21 | -1.1 ± 1.13 | 18.66 ± 5.3 |