5,10,15,20–Tetrakis(4–hydroxyphenyl) porphyrin (THPP) is a synthetic meso tetraarylporphyrin. Its structure comprises a ring of four pyrrole units connected by methine bridges, featuring a mobile electronic system and four meso–phenyl rings, each with a polarity–increasing para–hydroxyl group. THPP dissolves in organic solutions and exhibits strong absorption in the visible region, giving it an intense color. The compound can adjust its electron distribution, which improves its interaction with metal surfaces. It acts as a mixed–type inhibitor, primarily adsorbing via electrostatic forces between the metal surface and its highly polarizable porphyrin ring. The para hydroxyl groups further aid adsorption, especially on hydrated and oxide–covered metals.

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