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Rapid estimation of lead in lipsticks

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Graphical Abstract



Highlights

- A new rhodamine-naphthalimide conjugate (**RNPC**) has been introduced for the selective detection and estimation of lead (II) ion at nanomolar level in aqueous medium.
- Interactions of **RNPC**-Pb²⁺ complex are well explained by absorbance, fluorescence, NMR titrations as well as by TD-DFT calculations.
- Selective "turn on" fluorescence property of **RNPC** allowed us to estimate the amount of lead (II) ion presnt in a widely used cosmetic-Lipstick.
- Probe **RNPC** exhibits excellent selectivity to detect Pb²⁺ ion in biological systems.

Abstract

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