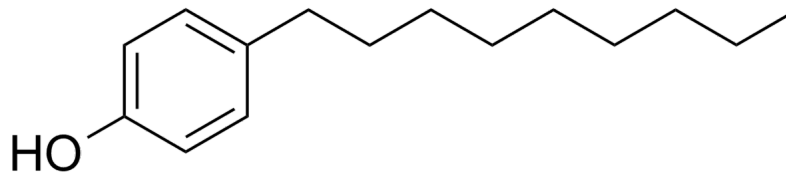


CAS 104-40-5, 25154-52-3, 84852-15-3

# Nonylphenol (NP) & 4-Nonylphenol (4NP [including branched forms])

C<sub>15</sub>H<sub>24</sub>O



## Summary of Health Effects

Based on studies in animals, nonylphenol (NP) and 4-nonylphenol (4NP) may affect how hormones act in the human body.

## How is nonylphenol used?

Commercial NP used in manufacturing is a mixture containing mostly 4NP.<sup>1</sup> NP and 4NP are used to make chemical surfactants used in detergents and cleaners, and as a color dispersant used in consumer products.<sup>1,2</sup> NP is also used to make plastics, rubber, lubricating oils, pesticides, and epoxy resins and hardeners.<sup>1</sup>

## Toxicity: What are its health effects?

4NP is on the European Union's List of Potential Category 1 endocrine disruptors.<sup>3</sup>

In the European Commission's study designed to gather information on endocrine disrupting substances with insufficient data, nonylphenols were originally placed in group II based on evidence of endocrine disruption.<sup>4</sup>

It was recommended in 2002 that they be moved to group I, in order to "properly reflect

concern for these substances in the environment as they are widely used and are found in measurable levels in the environment."<sup>4</sup>

## Exposure: How can a person come in contact with it?

A person can come in contact with NP by breathing in contaminated air, eating contaminated food, drinking contaminated water, or from skin contact with consumer products. NP can also be passed on to children through breastmilk.<sup>1,5</sup>

In a study on Italian women, NP was found to have accumulated in breast milk. This same study also found a correlation between seafood and higher concentrations of NP in the body.<sup>5</sup>

In a reference population of 394 adults in the United States, 4NP was detected in 51% of the urine samples.<sup>2</sup>

The 2014 National Health and Nutrition Examination Survey (NHANES) report did not include data for nonylphenol.

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