

## **Nonylphenol Distribution in Rivers Flowing into the Seto Inland Sea**

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### **Abstract**

In order to clarify the characteristics of nonylphenol (NP) concentration in urban stream and river waters of Hyogo Prefecture, west Japan, flowing into the Seto Inland Sea, field monitoring studies were performed at 56 sampling points by using GC/MS technique during 1998 and 1999. From the study of analytical process blank, the contamination of NP was found, which was considered to be the eluviation of NP from the plastic equipment for experimental. In stream and river waters of Hyogo Prefecture, NP distributed from ND (<0.5) to 5.0 $\mu$ g/l (total average; 0.54 $\mu$ g/l) and the sampling points over 1  $\mu$ g/l occupied 14%. Relatively high concentrations of NP appeared in southwest areas of Hyogo Pref., where the sewerage diffusion rates were below 80%. This suggested the relation between NP concentrations in urban streams and the degree of pollution loads from catchment areas. From this study and several studies by other investigators, it was presumed that Japanese urban streams were contaminated by NP with the order of magnitude of 1 $\mu$ g/l in the case of higher pollution. River die-away experiments showed that the biodegradation rate of NP was 30% at experimental day 7 at low concentration level (initial conc.; 0.59 $\mu$ g/l). From this, the residual tendency of NP in the aquatic environment was presumed.