

CONCLUSION

In this report an attempt was made to quantify the impact of the use of kitchen food waste disposers to the Dutch sewer systems and waste water treatment plants. Although an overwhelming amount of data in foreign literature is available regarding the impacts of kitchen food waste disposers there are no data based on fieldwork in literature dealing with the Dutch situation. The quantification of the impacts of disposers to the sewer systems and waste water treatment plants in the Netherlands is based both on Dutch statistics and on a part of the mentioned foreign literature and on scientific judgment and on common sense.

The impact of the use of a kitchen food waste disposer to the sewer system and the waste water treatment is judged on the basis of the calculated impact at a penetration level of 5 to 10%. As stated before according to the manufacturer a penetration level of 10% should be qualified as the higher end of the possible long-term penetration in view of historical penetration levels in the USA and the United Kingdom.

One general conclusion of this study with respect to the impact of kitchen food waste disposers to the Dutch sewer systems and waste water treatment plants is that this impact is minimal and that the adverse effects are negligible. More specific the most important conclusions are:

- There is no evidence that the use of kitchen food waste disposers leads to clogging of indoor and outdoor sewer pipes.
- The use of kitchen food waste disposers does not lead to an increase of the hydraulic load to the sewer system.
- The increase of loads to the biological waste water treatment processes due to the use of kitchen food waste disposers is negligible.
- There is an increase of 2.5 to 5% in loads to the sludge thickeners and digester. With the existing capacity this increase of loads is negligible.

With respect to the increase of costs for sludge dewatering and sludge incineration due to the use of kitchen food waste disposers the following remarks

can be made:

- The costs for dewatering and incineration of the sludge produced by one person who is using a kitchen food waste disposer are approximately f 9.50 per year;
- With a penetration level of 5% and charging the total Dutch population for the additional costs the waste water treatment costs will increase with approximately f 0.35 per person per year. Compared with the annual waste water treatment costs in 1993 of f 63.00 per person this means an increase of only 0.5%. With 10% penetration the increase in costs is approximately f 0.69 per person per year or 1.1%.

Kitchen Food Waste Disposers

Effects On Sewer System and Waste Water Treatment

April 1996 dr.ir J. de Koning, prof.ir. J.H.J.M. van der Graaf

TU Delft	Faculteit der Civiele Techniek
Technische Universiteit Delft	Department of Water Management. Environmental &
Sanitary Engineering	