



Figure 3 Comparison of representative PCDD/F congener patterns in investigated terrestrial samples, given as concentrations in conifer shoots (ng/kg dm), roe deer liver (pg/g fat), and soil (ng/kg dm) from sampling site R6 and sampling year 2002.

Conclusion

The liver of roe deer is highly contaminated with PCDD/F and dl-PCBs even in natural surroundings. The results show high loaded roe deers in low contaminated soil, and also in areas with high contaminated soil the liver is not higher burdened than in other regions. Looking for conifer shoots as an indicator for air contamination and first entry into plants there is also no correlation. This finding is very surprising and the cause cannot be explained but by a specific metabolism in liver. For sheep one source of PCDD/F and dl-PCB is the uptake of soil while they are grazing but this builds only a fraction of the contamination. Other sources are feed and still unknown causes. Roe deer have a different eating behavior. Their diet varies and includes less grass but more buds and leaves. The kids take milk from their mother for about 6 month or more but eat fresh leaves and herbs from the 2nd week of their life. High contamination of liver was the starting point to analyze roe deer livers. The study shows that respective high burdens are not only observed in sheep but also in other terrestrial mammals. Furthermore, the fact that ESB sampling sites cover regions all over Germany indicate that there are no regional influences.

References

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