

モニタリング調査

平成18年度化学物質環境実態調査結果 地域別データ

調査名：モニタリング調査（POPs及びHCH類）

調査媒体：生物（pg/g-wet）

地方公共団体：北海道

試料採取機関：北海道環境科学研究センター

調査地点及び生物種：釧路沖 ウサギアイナメ

| 調査対象物質 | 検体番号 | 測定値 | 検出下限値 | 定量下限値 |
|--|------|---------|-------|-------|
| [1] PCB類 | 1 | 1,600 | ※14 | ※42 |
| | 2 | 1,800 | | |
| | 3 | 1,600 | | |
| | 4 | 1,300 | | |
| | 5 | 1,500 | | |
| [1-1] モノクロロビフェニル類 | 1 | nd | 2 | 5 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | nd | | |
| [1-2] ジクロロビフェニル類 | 1 | 13 | 2 | 6 |
| | 2 | 12 | | |
| | 3 | 11 | | |
| | 4 | 12 | | |
| | 5 | 12 | | |
| [1-3] トリクロロビフェニル類 | 1 | 76 | 1 | 4 |
| | 2 | 93 | | |
| | 3 | 77 | | |
| | 4 | 74 | | |
| | 5 | 82 | | |
| [1-4] テトラクロロビフェニル類 | 1 | 200 | 1 | 4 |
| | 2 | 230 | | |
| | 3 | 210 | | |
| | 4 | 160 | | |
| | 5 | 200 | | |
| [1-4-1] コブラナーPCBのうち 3,3',4,4'-テトラクロロビフェニル（#77） | 1 | 1.7 | 0.3 | 0.7 |
| | 2 | 3.0 | | |
| | 3 | 3.1 | | |
| | 4 | 2.6 | | |
| | 5 | 3.0 | | |
| [1-4-2] コブラナーPCBのうち 3,4,4',5'-テトラクロロビフェニル（#81） | 1 | nd | 0.7 | 1.8 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | nd | | |
| [1-5] ペンタクロロビフェニル類 | 1 | 450 | 1 | 4 |
| | 2 | 510 | | |
| | 3 | 450 | | |
| | 4 | 350 | | |
| | 5 | 400 | | |
| [1-5-1] コブラナーPCBのうち 2,3,3',4,4'-ペンタクロロビフェニル（#105） | 1 | 39 | 1 | 3 |
| | 2 | 46 | | |
| | 3 | 46 | | |
| | 4 | 33 | | |
| | 5 | 37 | | |
| [1-5-2] コブラナーPCBのうち 2,3,4,4',5'-ペンタクロロビフェニル（#114） | 1 | 3.1 | 0.8 | 2.0 |
| | 2 | 3.6 | | |
| | 3 | 3.6 | | |
| | 4 | 2.5 | | |
| | 5 | 3.0 | | |
| [1-5-3] コブラナーPCBのうち 2,3',4,4',5'-ペンタクロロビフェニル（#118） | 1 | 120 | 1 | 3 |
| | 2 | 140 | | |
| | 3 | 130 | | |
| | 4 | 100 | | |
| | 5 | 110 | | |
| [1-5-4] コブラナーPCBのうち 2',3,4,4',5'-ペンタクロロビフェニル（#123） | 1 | tr(1.4) | 0.8 | 2.2 |
| | 2 | tr(1.9) | | |
| | 3 | tr(1.9) | | |
| | 4 | tr(1.5) | | |
| | 5 | tr(1.8) | | |
| [1-5-5] コブラナーPCBのうち 3,3',4,4',5'-ペンタクロロビフェニル（#126） | 1 | nd | 0.9 | 2.5 |
| | 2 | tr(1.5) | | |
| | 3 | tr(1.4) | | |
| | 4 | tr(0.9) | | |
| | 5 | tr(1.2) | | |

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|--|------|---------|-------|-------|
| [1-6] ヘキサクロロビフェニル類 | 1 | 600 | 2 | 4 |
| | 2 | 670 | | |
| | 3 | 590 | | |
| | 4 | 480 | | |
| | 5 | 520 | | |
| [1-6-1] コプラナーPCBのうち 2,3,3',4,4',5'-ヘキサクロロビフェニル (#156) | 1 | 9 | 1 | 3 |
| | 2 | 11 | | |
| | 3 | 9 | | |
| | 4 | 7 | | |
| | 5 | 8 | | |
| [1-6-2] コプラナーPCBのうち 2,3,3',4,4',5'-ヘキサクロロビフェニル (#157) | 1 | 2.8 | 0.9 | 2.5 |
| | 2 | 3.6 | | |
| | 3 | 3.2 | | |
| | 4 | 2.5 | | |
| | 5 | 2.7 | | |
| [1-6-3] コプラナーPCBのうち 2,3',4,4',5,5'-ヘキサクロロビフェニル (#167) | 1 | 5 | 1 | 3 |
| | 2 | 6 | | |
| | 3 | 6 | | |
| | 4 | 4 | | |
| | 5 | 5 | | |
| [1-6-4] コプラナーPCBのうち 3,3',4,4',5,5'-ヘキサクロロビフェニル (#169) | 1 | nd | 1 | 3 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | nd | | |
| [1-7] ヘプタクロロビフェニル類 | 1 | 230 | 1 | 4 |
| | 2 | 260 | | |
| | 3 | 220 | | |
| | 4 | 170 | | |
| | 5 | 200 | | |
| [1-7-1] コプラナーPCBのうち 2,2',3,3',4,4',5'-ヘプタクロロビフェニル (#170) | 1 | 27 | 2 | 6 |
| | 2 | 29 | | |
| | 3 | 26 | | |
| | 4 | 20 | | |
| | 5 | 24 | | |
| [1-7-2] コプラナーPCBのうち 2,2',3,4,4',5,5'-ヘプタクロロビフェニル (#180) | 1 | 76 | 2 | 5 |
| | 2 | 78 | | |
| | 3 | 66 | | |
| | 4 | 52 | | |
| | 5 | 59 | | |
| [1-7-3] コプラナーPCBのうち 2,3,3',4,4',5,5'-ヘプタクロロビフェニル (#189) | 1 | tr(1.0) | 0.5 | 1.3 |
| | 2 | tr(1.0) | | |
| | 3 | tr(0.9) | | |
| | 4 | tr(0.7) | | |
| | 5 | tr(0.8) | | |
| [1-8] オクタクロロビフェニル類 | 1 | 37 | 2 | 5 |
| | 2 | 41 | | |
| | 3 | 33 | | |
| | 4 | 27 | | |
| | 5 | 32 | | |
| [1-9] ノナクロロビフェニル類 | 1 | tr(3) | 1 | 4 |
| | 2 | 4 | | |
| | 3 | tr(3) | | |
| | 4 | tr(2) | | |
| | 5 | tr(3) | | |
| [1-10] デカクロロビフェニル | 1 | tr(1.1) | 0.6 | 1.7 |
| | 2 | tr(1.5) | | |
| | 3 | tr(1.1) | | |
| | 4 | tr(0.9) | | |
| | 5 | tr(1.1) | | |
| [2] HCB (ヘキサクロロベンゼン) | 1 | 260 | 1 | 3 |
| | 2 | 290 | | |
| | 3 | 270 | | |
| | 4 | 240 | | |
| | 5 | 270 | | |
| [3] アルドリン | 1 | nd | 2 | 4 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | nd | | |

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|---------------------------|------|-------|-------|-------|
| [4] デイルドリン | 1 | 110 | 3 | 7 |
| | 2 | 170 | | |
| | 3 | 160 | | |
| | 4 | 150 | | |
| | 5 | 160 | | |
| [5] エンドリン | 1 | tr(7) | 4 | 11 |
| | 2 | tr(8) | | |
| | 3 | tr(8) | | |
| | 4 | tr(8) | | |
| | 5 | tr(8) | | |
| [6] DDT類 | 1 | 480 | ※7 | ※19 |
| | 2 | 630 | | |
| | 3 | 540 | | |
| | 4 | 470 | | |
| | 5 | 520 | | |
| [6-1] <i>p,p'</i> -DDT | 1 | 56 | 2 | 6 |
| | 2 | 83 | | |
| | 3 | 64 | | |
| | 4 | 52 | | |
| | 5 | 61 | | |
| [6-2] <i>p,p'</i> -DDE | 1 | 330 | 0.7 | 1.9 |
| | 2 | 420 | | |
| | 3 | 380 | | |
| | 4 | 330 | | |
| | 5 | 350 | | |
| [6-3] <i>p,p'</i> -DDD | 1 | 64 | 0.9 | 2.4 |
| | 2 | 93 | | |
| | 3 | 75 | | |
| | 4 | 63 | | |
| | 5 | 76 | | |
| [6-4] <i>o,p'</i> -DDT | 1 | 12 | 1 | 3 |
| | 2 | 15 | | |
| | 3 | 12 | | |
| | 4 | 10 | | |
| | 5 | 13 | | |
| [6-5] <i>o,p'</i> -DDE | 1 | 4 | 1 | 3 |
| | 2 | 6 | | |
| | 3 | 4 | | |
| | 4 | 3 | | |
| | 5 | 5 | | |
| [6-6] <i>o,p'</i> -DDD | 1 | 9 | 1 | 4 |
| | 2 | 12 | | |
| | 3 | 9 | | |
| | 4 | 8 | | |
| | 5 | 10 | | |
| [7] クロルデン類 | 1 | 380 | ※8 | ※21 |
| | 2 | 530 | | |
| | 3 | 490 | | |
| | 4 | 410 | | |
| | 5 | 460 | | |
| [7-1] <i>cis</i> -クロルデン | 1 | 75 | 1 | 4 |
| | 2 | 110 | | |
| | 3 | 97 | | |
| | 4 | 84 | | |
| | 5 | 100 | | |
| [7-2] <i>trans</i> -クロルデン | 1 | 14 | 2 | 4 |
| | 2 | 17 | | |
| | 3 | 14 | | |
| | 4 | 14 | | |
| | 5 | 17 | | |
| [7-3] オキシクロルデン | 1 | 75 | 3 | 7 |
| | 2 | 95 | | |
| | 3 | 96 | | |
| | 4 | 76 | | |
| | 5 | 85 | | |

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| [7-4] <i>cis</i> -ノナクロル | 1 | 41 | 1 | 3 |
| | 2 | 56 | | |
| | 3 | 50 | | |
| | 4 | 40 | | |
| | 5 | 47 | | |
| [7-5] <i>trans</i> -ノナクロル | 1 | 180 | 1 | 3 |
| | 2 | 250 | | |
| | 3 | 230 | | |
| | 4 | 200 | | |
| | 5 | 210 | | |
| [8] ヘプタクロル類 | 1 | 44 | ※8 | ※23 |
| | 2 | 54 | | |
| | 3 | 54 | | |
| | 4 | 50 | | |
| | 5 | 54 | | |
| [8-1] ヘプタクロル | 1 | nd | 2 | 6 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | nd | | |
| [8-2] <i>cis</i> -ヘプタクロルエポキシド | 1 | 41 | 1 | 4 |
| | 2 | 51 | | |
| | 3 | 51 | | |
| | 4 | 47 | | |
| | 5 | 50 | | |
| [8-3] <i>trans</i> -ヘプタクロルエポキシド | 1 | nd | 5 | 13 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | nd | | |
| [9-1] 2-endo,3-exo,5-endo,6-exo,8,8,10,10-オクタクロロボルナン (Parlar-26) | 1 | 84 | 7 | 18 |
| | 2 | 130 | | |
| | 3 | 120 | | |
| | 4 | 98 | | |
| | 5 | 110 | | |
| [9-2] 2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-ノナクロロボルナン (Parlar-50) | 1 | 74 | 5 | 14 |
| | 2 | 110 | | |
| | 3 | 97 | | |
| | 4 | 81 | | |
| | 5 | 94 | | |
| [9-3] 2,2,5,5,8,9,9,10,10-ノナクロロボルナン (Parlar-62) | 1 | nd | 30 | 70 |
| | 2 | nd | | |
| | 3 | nd | | |
| | 4 | nd | | |
| | 5 | tr(30) | | |
| [10] マイレックス | 1 | 9 | 1 | 3 |
| | 2 | 13 | | |
| | 3 | 10 | | |
| | 4 | 9 | | |
| | 5 | 9 | | |
| [11-1] α-HCH | 1 | 150 | 1 | 3 |
| | 2 | 160 | | |
| | 3 | 160 | | |
| | 4 | 150 | | |
| | 5 | 170 | | |
| [11-2] β-HCH | 1 | 140 | 1 | 3 |
| | 2 | 140 | | |
| | 3 | 140 | | |
| | 4 | 140 | | |
| | 5 | 150 | | |
| [11-3] γ-HCH | 1 | 39 | 2 | 4 |
| | 2 | 40 | | |
| | 3 | 38 | | |
| | 4 | 40 | | |
| | 5 | 44 | | |
| [11-4] δ-HCH | 1 | 3 | 1 | 3 |
| | 2 | 3 | | |
| | 3 | 3 | | |
| | 4 | 3 | | |
| | 5 | 3 | | |

(注1)検出下限値以上を検出とした。

(注2)※は同族体又は該当物質ごとの定量[検出]下限値の合計とした。

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平成18年度化学物質環境実態調査結果 地域別データ

調査名：モニタリング調査（POPs及びHCH類以外）

調査媒体：生物

地方公共団体：北海道

試料採取機関：北海道環境科学研究センター

調査地点及び生物種：釧路沖 ウサギアイナメ

| 調査対象物質 | 検体番号 | 測定値 | 検出下限値 | 定量下限値 | 単位 |
|--|------|---------|-------|-------|----------|
| [12] 2-クロロ-4-エチルアミノ-6-イソプロピルアミノ-1,3,5-トリアジン (別名：アトラジン) | 1 | nd | 0.38 | 0.98 | ng/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [13] 2,2,2-トリクロロ-1,1-ビス(4-クロロフェニル)エタノール (別名：ケルセン又はジコホル) | 1 | nd | 0.036 | 0.092 | ng/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [14] 2,4,6-トリ- <i>tert</i> -ブチルフェノール | 1 | nd | 2.2 | 5.7 | ng/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [15] フタル酸ジ- <i>n</i> -ブチル | 1 | tr(34) | 15 | 38 | ng/g-wet |
| | 2 | 43 | | | |
| | 3 | tr(34) | | | |
| | 4 | tr(25) | | | |
| | 5 | tr(23) | | | |
| [16] ポリ塩化ナフタレン類 | 1 | tr(12) | ※11 | ※27 | pg/g-wet |
| | 2 | tr(19) | | | |
| | 3 | tr(20) | | | |
| | 4 | tr(17) | | | |
| | 5 | tr(18) | | | |
| [16-1] モノクロロナフタレン類 | 1 | tr(2.1) | 1.7 | 4.5 | pg/g-wet |
| | 2 | tr(3.7) | | | |
| | 3 | tr(3.3) | | | |
| | 4 | tr(3.5) | | | |
| | 5 | tr(3.2) | | | |
| [16-1-1] 2-クロロナフタレン | 1 | nd | 1.7 | 4.5 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-2] ジクロロナフタレン類 | 1 | tr(2.3) | 1.6 | 4.2 | pg/g-wet |
| | 2 | tr(3.6) | | | |
| | 3 | tr(3.6) | | | |
| | 4 | tr(3.1) | | | |
| | 5 | tr(3.4) | | | |
| [16-2-1] 1,5-ジクロロナフタレン | 1 | nd | 1.8 | 4.6 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-2-2] 2,7-ジクロロナフタレン | 1 | nd | 1.6 | 4.2 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-3] トリクロロナフタレン類 | 1 | tr(1.7) | 1.4 | 3.6 | pg/g-wet |
| | 2 | tr(2.5) | | | |
| | 3 | tr(3.0) | | | |
| | 4 | tr(1.9) | | | |
| | 5 | tr(2.2) | | | |
| [16-3-1] 1,2,3-トリクロロナフタレン | 1 | nd | 1.4 | 3.6 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |

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|--|------|---------|-------|-------|----------|
| [16-4] テトラクロロナフタレン類 | 1 | 3.4 | 0.36 | 0.92 | pg/g-wet |
| | 2 | 5.2 | | | |
| | 3 | 5.2 | | | |
| | 4 | 4.1 | | | |
| | 5 | 4.4 | | | |
| [16-4-1] 1,2,3,4-テトラクロロナフタレン | 1 | nd | 1.4 | 3.5 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-4-2] 1,2,3,8-テトラクロロナフタレン | 1 | nd | 1.6 | 4.1 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-4-3] 1,2,5,6-及び1,2,3,5-テトラクロロナフタレン | 1 | nd | 0.36 | 0.92 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-4-4] 1,4,5,8-テトラクロロナフタレン | 1 | nd | 0.95 | 2.5 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-4-5] 2,3,6,7-テトラクロロナフタレン | 1 | nd | 1.8 | 4.5 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-5] ペンタクロロナフタレン類 | 1 | nd | 1.7 | 4.4 | pg/g-wet |
| | 2 | tr(2.0) | | | |
| | 3 | tr(2.7) | | | |
| | 4 | tr(2.1) | | | |
| | 5 | tr(2.5) | | | |
| [16-5-1] 1,2,3,4,6-ペンタクロロナフタレン | 1 | nd | 1.8 | 4.6 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-5-2] 1,2,3,5,7-ペンタクロロナフタレン | 1 | nd | 1.7 | 4.4 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-5-3] 1,2,3,5,8-ペンタクロロナフタレン | 1 | nd | 1.3 | 3.3 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |

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|------------------------------------|------|-----|-------|-------|----------|
| [16-6] ヘキサクロロナフタレン類 | 1 | nd | 1.2 | 3.0 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-6-1] 1,2,3,4,6,7-ヘキサクロロナフタレン | 1 | nd | 1.2 | 3.0 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-6-2] 1,2,3,5,7,8-ヘキサクロロナフタレン | 1 | nd | 1.6 | 4.1 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-6-3] 1,2,4,5,7,8-ヘキサクロロナフタレン | 1 | nd | 1.6 | 4.2 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-7] ヘプタクロロナフタレン類 | 1 | nd | 0.85 | 2.2 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-7-1] 1,2,3,4,5,6,7-ヘプタクロロナフタレン | 1 | nd | 0.85 | 2.2 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [16-8] オクタクロロナフタレン | 1 | nd | 1.7 | 4.3 | pg/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [17] ジオキシルスズ化合物 | 1 | nd | 0.27 | 0.70 | ng/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |
| [18] りん酸トリ- <i>n</i> -ブチル | 1 | nd | 0.4 | 1.0 | ng/g-wet |
| | 2 | nd | | | |
| | 3 | nd | | | |
| | 4 | nd | | | |
| | 5 | nd | | | |

(注1)検出下限値以上を検出とした。

(注2)※は同族体ごとの定量[検出]下限値の合計とした。