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ANALYSERAPPORT

COWI
Parallelvej 2
2800 Lyngby
Att.: Anne Gammeltoft Hindrichsen

Udskrevet: 04-05-2021
Version: 1
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Analyseperiode: 27-04-2021 -
04-05-2021
Ordrenr.: 640530

Sagsnavn: Minkgrav Karup
Lokalitet: Minkgrav Karup
Udtaget: 27-04-2021
Prøvetype: Råvand
Prøvetager: COWI/JLE
Kunde: Miljøstyrelsen Odense, Tolderlundsvej 5, 5000 Odense, Att. Jesper Schiött Jensen
, PersonRef. jesje@mst.dk

| Prøvenr.: | 85308/21 | 85310/21 | 85314/21 | 85315/21 | 85316/21 | | |
|-----------------------------------|----------|----------|----------|----------|----------|------------|-----------------------------------|
| Prøvested: | M4 | M12 | M16 | M17 | M18 | | |
| Kommentar | *1 | *1 | *1 | *1 | *1 | | |
| Parameter | | | | | | Enhed | Metode |
| Anioner totalt | 0.71 | 0.67 | 0.70 | 0.75 | 1.30 | meq/l | Beregning |
| Kationer totalt | 0.73 | 0.68 | 0.71 | 0.79 | 1.32 | meq/l | Beregning |
| Coliforme bakterier | <1 | <1 | <1 | <1 | <1 | cfu/100 ml | DS/EN ISO 9308-1:2014/A1:2017 |
| pH | 5.3 | 5.1 | 5.2 | 6.0 | 6.3 | pH | DS/EN ISO 10523:2012 |
| Ammonium+ammoniak-NH4+, Filt Felt | <0.0040 | 0.014 | 0.0041 | 0.0077 | 0.0094 | mg/l | DS/ISO 15923-1:2013+DS224:1975Mod |
| Nitrat, NO3-, Filt Felt | 1.5 | 1.9 | 7.9 | 5.6 | 11 | mg/l | DS/ISO 15923-1:2013 + beregning |
| Nitrit, NO2- | <0.0010 | 0.0023 | <0.0010 | 0.0011 | <0.0010 | mg/l | DS/ISO 15923-1:2013 |
| NVOC, Filt Felt | 2.1 | 2.5 | 1.1 | 1.3 | 1.9 | mg/l | DS/EN 1484:1997+SM 5310B:2014 |
| Total phosphor P, Filt Felt | 0.0040 | 0.0030 | <0.0030 | 0.0030 | 0.0050 | mg/l | DS/EN ISO 6878:2004 Del 7 |
| Orthophosphat-P, Filt Felt | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0032 | mg/l | DS/ISO 15923-1:2013 |
| Hydrogencarbonat, HCO3 Filt Felt | 2.5 | 2.8 | 0.94 | 10 | 21 | mg/l | Granplot |
| COD iltforbrug m. dichromat # | 5.3 | <5.0 | <5.0 | <5.0 | <5.0 | mg/l | DS/ISO 15705:2006 |
| Total kvælstof, N | 0.50 | 0.59 | 1.9 | 1.3 | 2.2 | mg/l | DS/EN ISO 11905-1:1998 |
| Chlorid, Cl- | 16 | 13 | 15 | 11 | 22 | mg/l | DS/ISO 15923-1:2013 |
| Sulfat, SO4-- | 9.2 | 11 | 6.5 | 9.0 | 7.6 | mg/l | DS/ISO 15923-1:2013 |
| Hydrogencarbonat, HCO3 Filt Felt | - | - | - | - | - | mg/l | DS/EN ISO 9963-1:1996 |
| Suspenderede stoffer | 6.0 | 2.4 | 2.2 | 2.2 | 1.6 | mg/l | DS/EN 872:2005, 1,6µm |
| Jern, Fe, opløst | 0.014 | 0.013 | <0.010 | <0.010 | 0.016 | mg/l | DS/EN ISO 11885:2009 |
| Mangan, Mn, Filt Felt | 0.035 | 0.058 | 0.032 | 0.029 | 0.021 | mg/l | DS/EN ISO 11885:2009 |
| Natrium, Na+, Filt Felt | 8.5 | 6.1 | 8.3 | 10 | 21 | mg/l | DS/EN ISO 11885:2009 |
| Kalium, K+, Filt Felt | 1.9 | 2.4 | 1.6 | 1.4 | 1.3 | mg/l | DS/EN ISO 11885:2009 |
| Calcium, Ca++, Filt Felt | 5.4 | 6.2 | 5.0 | 5.4 | 6.5 | mg/l | DS/EN ISO 11885:2009 |
| Magnesium, Mg++, Filt Felt | 0.53 | 0.46 | 0.71 | 0.59 | 0.58 | mg/l | DS/EN ISO 11885:2009 |
| Barium, Ba, Filt Felt | 40 | 28 | 24 | 13 | 14 | µg/l | DS/EN ISO 17294-2:2016 |
| Phenoler | | | | | | | - AK158 - GC/MS |
| Phenol | <0.050 | 0.91 | <0.050 | <0.050 | <0.050 | µg/l | AK158 - GC/MS |

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Laboratoriet er akkrediteret af DANAK. Analyseresultaterne gælder kun for de(n) analyserede prøve(r).
Analyserapporten må kun gengives i sin helhed, med mindre skriftlig godkendelse forligger
Oplysninger om måleusikkerhed findes på www.alsglobal.dk

Tegnforklaring:
#: Ikke akkrediteret i.p.: Ikke påvist
<: mindre end >: Større end



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ANALYSERAPPORT

| Prøvenr.: | 85318/21 | 85322/21 | 85324/21 | 85328/21 | 85329/21 | | |
|-----------------------------------|----------|----------|----------|----------|----------|------------|-----------------------------------|
| Prøvested: | M20 | M24 | M26 | M30 | S1 | | |
| Kommentar | *1 | *1 | *1 | *1 | *1 | | |
| Parameter | | | | | | Enhed | Metode |
| Anioner totalt | 0.69 | 0.78 | 0.67 | 1.64 | 0.68 | meq/l | Beregning |
| Kationer totalt | 0.73 | 0.83 | 0.68 | 1.59 | 0.72 | meq/l | Beregning |
| Coliforme bakterier | <1 | <1 | <1 | <1 | <1 | cfu/100 ml | DS/EN ISO 9308-1:2014/A1:2017 |
| pH | 5.2 | 5.4 | 5.1 | 4.5 | 4.9 | pH | DS/EN ISO 10523:2012 |
| Ammonium+ammoniak-NH4+, Filt Felt | 0.014 | 0.036 | 0.012 | 0.0076 | 3.6 | mg/l | DS/ISO 15923-1:2013+DS224:1975Mod |
| Nitrat, NO3-, Filt Felt | 0.63 | 2.6 | 8.3 | 40 | 1.7 | mg/l | DS/ISO 15923-1:2013 + beregning |
| Nitrit, NO2- | 0.0025 | <0.0010 | <0.0010 | 0.0015 | 0.011 | mg/l | DS/ISO 15923-1:2013 |
| NVOC, Filt Felt | 3.7 | 3.7 | 1.2 | 1.2 | 30 | mg/l | DS/EN 1484:1997+SM 5310B:2014 |
| Total phosphor P, Filt Felt | 0.010 | 0.015 | 0.0030 | 0.0030 | 0.0060 | mg/l | DS/EN ISO 6878:2004 Del 7 |
| Orthophosphat-P, Filt Felt | 0.0014 | 0.0012 | <0.0010 | <0.0010 | <0.0010 | mg/l | DS/ISO 15923-1:2013 |
| Hydrogencarbonat, HCO3 Filt Felt | 7.9 | 3.8 | 0.48 | <0.30 | 8.9 | mg/l | Granplot |
| COD iltforbrug m. dichromat # | 7.0 | 9.2 | <5.0 | <5.0 | 85 | mg/l | DS/ISO 15705:2006 |
| Total kvælstof, N | 0.40 | 0.73 | 1.8 | 7.9 | 3.9 | mg/l | DS/EN ISO 11905-1:1998 |
| Chlorid, Cl- | 12 | 19 | 15 | 27 | 9.8 | mg/l | DS/ISO 15923-1:2013 |
| Sulfat, SO4-- | 10 | 6.6 | 5.0 | 11 | 11 | mg/l | DS/ISO 15923-1:2013 |
| Hydrogencarbonat, HCO3 Filt Felt | - | - | - | - | - | mg/l | DS/EN ISO 9963-1:1996 |
| Suspenderede stoffer | <1.0 | 1.4 | 1.2 | <1.0 | 1.0 | mg/l | DS/EN 872:2005, 1,6µm |
| Jern, Fe, opløst | 0.020 | 0.036 | 0.016 | 0.021 | 0.28 | mg/l | DS/EN ISO 11885:2009 |
| Mangan, Mn, Filt Felt | 0.070 | 0.024 | 0.047 | 0.43 | 0.26 | mg/l | DS/EN ISO 11885:2009 |
| Natrium, Na+, Filt Felt | 5.4 | 11 | 9.8 | 17 | 4.6 | mg/l | DS/EN ISO 11885:2009 |
| Kalium, K+, Filt Felt | 2.4 | 1.5 | 1.1 | 3.4 | 3.1 | mg/l | DS/EN ISO 11885:2009 |
| Calcium, Ca++, Filt Felt | 7.5 | 5.3 | 3.3 | 8.6 | 7.8 | mg/l | DS/EN ISO 11885:2009 |
| Magnesium, Mg++, Filt Felt | 0.69 | 0.52 | 0.73 | 3.9 | 0.44 | mg/l | DS/EN ISO 11885:2009 |
| Barium, Ba, Filt Felt | 25 | 17 | 25 | 57 | 35 | µg/l | DS/EN ISO 17294-2:2016 |
| Phenoler | | | | | | | - AK158 - GC/MS |
| Phenol | 3.3 | <0.050 | <0.050 | <0.050 | 23 | µg/l | AK158 - GC/MS |

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 #: Ikke akkrediteret i.p.: Ikke påvist
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ANALYSERAPPORT

| Prøvenr.: | 85332/21 | 85333/21 | 85336/21 | 85337/21 | | |
|-----------------------------------|----------|----------|----------|----------|------------|-----------------------------------|
| Prøvested: | S4 | S5 | S8 | PB1 | | |
| Kommentar | *1 | *1 | *1 | *1 | | |
| Parameter | | | | | Enhed | Metode |
| Anioner totalt | 0.95 | 0.86 | 0.76 | 1.03 | meq/l | Beregning |
| Kationer totalt | 1.06 | 0.92 | 0.79 | 1.08 | meq/l | Beregning |
| Coliforme bakterier | <1 | <1 | 8200 | <1 | cfu/100 ml | DS/EN ISO 9308-1:2014/A1:2017 |
| pH | 5.1 | 5.0 | 5.3 | 5.2 | pH | DS/EN ISO 10523:2012 |
| Ammonium+ammoniak-NH4+, Filt Felt | 0.063 | 0.052 | 0.079 | 0.084 | mg/l | DS/ISO 15923-1:2013+DS224:1975Mod |
| Nitrat, NO3-, Filt Felt | 2.0 | 3.0 | 2.1 | 2.7 | mg/l | DS/ISO 15923-1:2013 + beregning |
| Nitrit, NO2- | 0.024 | <0.0010 | 0.0089 | <0.0010 | mg/l | DS/ISO 15923-1:2013 |
| NVOC, Filt Felt | 5.3 | 1.9 | 5.2 | 0.66 | mg/l | DS/EN 1484:1997+SM 5310B:2014 |
| Total phosphor P, Filt Felt | 0.0040 | 0.0030 | 0.0050 | 0.0030 | mg/l | DS/EN ISO 6878:2004 Del 7 |
| Orthophosphat-P, Filt Felt | <0.0010 | 0.0012 | <0.0010 | 0.0018 | mg/l | DS/ISO 15923-1:2013 |
| Hydrogencarbonat, HCO3 Filt Felt | 8.7 | 11 | 6.1 | 0.72 | mg/l | Granplot |
| COD iltforbrug m. dichromat # | 15 | <5.0 | 14 | <5.0 | mg/l | DS/ISO 15705:2006 |
| Total kvælstof, N | 0.84 | 0.89 | 0.85 | 0.63 | mg/l | DS/EN ISO 11905-1:1998 |
| Chlorid, Cl- | 20 | 15 | 19 | 22 | mg/l | DS/ISO 15923-1:2013 |
| Sulfat, SO4-- | 10 | 10 | 4.2 | 17 | mg/l | DS/ISO 15923-1:2013 |
| Hydrogencarbonat, HCO3 Filt Felt | - | - | - | - | mg/l | DS/EN ISO 9963-1:1996 |
| Suspenderede stoffer | <1.0 | 2.0 | 6.4 | <1.0 | mg/l | DS/EN 872:2005, 1,6µm |
| Jern, Fe, opløst | 0.026 | 0.019 | 0.044 | 0.22 | mg/l | DS/EN ISO 11885:2009 |
| Mangan, Mn, Filt Felt | 0.066 | 0.12 | 0.073 | 0.081 | mg/l | DS/EN ISO 11885:2009 |
| Natrium, Na+, Filt Felt | 8.9 | 4.8 | 9.9 | 14 | mg/l | DS/EN ISO 11885:2009 |
| Kalium, K+, Filt Felt | 2.5 | 3.2 | 1.3 | 3.0 | mg/l | DS/EN ISO 11885:2009 |
| Calcium, Ca++, Filt Felt | 11 | 11 | 5.5 | 6.4 | mg/l | DS/EN ISO 11885:2009 |
| Magnesium, Mg++, Filt Felt | 0.66 | 0.87 | 0.57 | 0.80 | mg/l | DS/EN ISO 11885:2009 |
| Barium, Ba, Filt Felt | 22 | 75 | 8.3 | 66 | µg/l | DS/EN ISO 17294-2:2016 |
| Phenoler | | | | | - | AK158 - GC/MS |
| Phenol | 2.2 | 0.33 | <0.050 | <0.050 | µg/l | AK158 - GC/MS |

Kommentar

*1 Ingen kommentar

Biljana Micic Popovic