Table 1. Crystal data and structure refinement for 4a.

Identification code	**4a**	
Empirical formula	$C_{17} H_{23} Ag N_5 O_2$	
Formula weight	435.26	
Temperature	373(2) K	
Wavelength	0.71073 Å	
Crystal system	Orthorhombic	
Space group	P2(1)2(1)2(1)	
Unit cell dimensions	a = 4.5586(17) Å	α= 90°.
	b = 14.900(6) Å	β= 90°.
	c = 29.923(12) Å	γ= 90°.
Volume	2032.5(14) $Å^3$	
Z	4	
Density (calculated)	1.422 Mg/m^3	
Absorption coefficient	1.010 mm^{-1}	
F(000)	884	
Crystal size	0.20 x 0.10 x 0.06 mm^3	
Theta range for data collection	1.36 to 24.99°.	
Index ranges	-5<=h<=3, -17<=k<=17, -34<=l<=29	
Reflections collected	6300	
Independent reflections	3506 [R(int) = 0.0650]	
Completeness to theta = 24.99°	98.9 %	
Absorption correction	SADABS	
Max. and min. transmission	0.9419 and 0.8235	
Refinement method	Full-matrix least-squares on F^2	
Data / restraints / parameters	3506 / 0 / 234	
Goodness-of-fit on F^2	1.034	
Final R indices [I>2sigma(I)]	R1 = 0.0655, wR2 = 0.1410	
R indices (all data)	R1 = 0.0952, wR2 = 0.1521	
Absolute structure parameter	-0.12(8)	
Largest diff. peak and hole	0.954 and -0.875 $e.Å^{-3}$	

Table 2. Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters ($Å^2$x 10^3) for **4a**. U(eq) is defined as one third of the trace of the orthogonalized U^{ij} tensor.

	x	y	z	U(eq)
Ag(1)	1155(2)	4382(1)	8761(1)	22(1)
N(1)	5429(19)	4118(5)	9578(3)	23(2)
N(2)	4745(16)	2896(5)	9228(3)	11(2)
N(3)	6470(20)	2866(5)	8286(3)	22(2)
N(4)	8075(17)	4462(6)	7862(3)	23(2)
N(5)	6696(17)	5582(6)	8235(3)	23(2)
O(1)	2480(40)	4613(6)	10402(3)	132(8)
O(2)	6490(40)	7515(8)	8103(4)	106(5)
O(3)	9817(19)	6885(6)	9579(3)	51(3)
O(4)	4750(20)	7894(6)	9503(3)	51(3)
C(1)	4180(40)	5146(9)	10191(6)	75(5)
C(2)	5120(30)	5027(7)	9748(4)	31(3)
C(3)	7210(20)	3484(7)	9772(4)	20(3)
C(4)	6700(20)	2738(7)	9550(3)	22(3)
C(5)	3850(30)	3768(7)	9246(3)	25(2)
C(6)	3630(30)	2254(7)	8889(3)	28(3)
C(7)	5830(20)	2117(6)	8520(3)	17(2)
C(8)	6950(20)	1309(8)	8441(3)	26(3)
C(9)	9080(20)	1230(6)	8092(3)	19(2)
C(10)	9800(20)	2000(7)	7851(4)	24(3)
C(11)	8500(30)	2789(7)	7967(3)	21(2)
C(12)	9540(20)	3633(8)	7725(4)	30(3)
C(13)	6010(20)	4896(7)	7603(4)	23(2)
C(14)	5180(20)	5589(8)	7840(3)	24(2)
C(15)	8540(30)	4871(6)	8255(4)	29(3)
C(16)	6590(30)	6284(6)	8584(3)	23(3)
C(17)	7860(30)	7165(10)	8423(5)	53(4)

Table 3. Bond lengths [Å] and angles [°] for **4a**.

Ag(1)-C(15)#1	2.060(13)
Ag(1)-C(5)	2.108(11)
N(1)-C(5)	1.336(14)
N(1)-C(3)	1.376(13)
N(1)-C(2)	1.453(14)
N(2)-C(4)	1.335(12)
N(2)-C(5)	1.363(12)
N(2)-C(6)	1.482(12)
N(3)-C(11)	1.337(14)
N(3)-C(7)	1.349(12)
N(4)-C(15)	1.343(13)
N(4)-C(13)	1.378(13)
N(4)-C(12)	1.463(14)
N(5)-C(15)	1.353(14)
N(5)-C(14)	1.369(13)
N(5)-C(16)	1.480(13)
O(1)-C(1)	1.277(16)
O(2)-C(17)	1.257(17)
C(1)-C(2)	1.405(18)
C(3)-C(4)	1.317(14)
C(6)-C(7)	1.506(14)
C(7)-C(8)	1.329(15)
C(8)-C(9)	1.430(14)
C(9)-C(10)	1.395(14)
C(10)-C(11)	1.360(15)
C(11)-C(12)	1.526(15)
C(13)-C(14)	1.309(15)
C(15)-Ag(1)#2	2.060(13)
C(16)-C(17)	1.511(17)
C(15)#1-Ag(1)-C(5)	174.7(4)
C(5)-N(1)-C(3)	111.4(9)
C(5)-N(1)-C(2)	125.0(9)
C(3)-N(1)-C(2)	123.3(9)
C(4)-N(2)-C(5)	109.9(9)

C(4)-N(2)-C(6)	127.5(9)
C(5)-N(2)-C(6)	122.6(9)
C(11)-N(3)-C(7)	116.7(9)
C(15)-N(4)-C(13)	112.7(10)
C(15)-N(4)-C(12)	123.9(10)
C(13)-N(4)-C(12)	123.4(9)
C(15)-N(5)-C(14)	111.1(10)
C(15)-N(5)-C(16)	122.8(9)
C(14)-N(5)-C(16)	125.9(9)
O(1)-C(1)-C(2)	125.0(13)
C(1)-C(2)-N(1)	118.5(11)
C(4)-C(3)-N(1)	105.2(9)
C(3)-C(4)-N(2)	109.5(10)
N(1)-C(5)-N(2)	103.9(9)
N(1)-C(5)-Ag(1)	131.1(7)
N(2)-C(5)-Ag(1)	124.1(8)
N(2)-C(6)-C(7)	111.1(9)
C(8)-C(7)-N(3)	125.0(10)
C(8)-C(7)-C(6)	120.7(9)
N(3)-C(7)-C(6)	114.3(8)
C(7)-C(8)-C(9)	117.8(10)
C(10)-C(9)-C(8)	117.9(9)
C(11)-C(10)-C(9)	118.6(10)
N(3)-C(11)-C(10)	123.8(10)
N(3)-C(11)-C(12)	119.0(9)
C(10)-C(11)-C(12)	117.1(10)
N(4)-C(12)-C(11)	114.9(9)
C(14)-C(13)-N(4)	105.3(10)
C(13)-C(14)-N(5)	108.3(10)
N(4)-C(15)-N(5)	102.6(10)
N(4)-C(15)-Ag(1)#2	125.1(8)
N(5)-C(15)-Ag(1)#2	132.1(8)
N(5)-C(16)-C(17)	112.2(10)
O(2)-C(17)-C(16)	114.4(13)

Symmetry transformations used to generate equivalent atoms:

#1 x-1,y,z #2 x+1,y,z

Table 4. Anisotropic displacement parameters ($Å^2 x 10^3$) for **4a**. The anisotropic displacement factor exponent takes the form: $-2\pi^2[h^2 a^{*2} U^{11} + ... + 2 h k a^* b^* U^{12}]$

	U^{11}	U^{22}	U^{33}	U^{23}	U^{13}	U^{12}
Ag(1)	22(1)	18(1)	25(1)	5(1)	-2(1)	1(1)
N(1)	33(6)	16(5)	18(5)	4(4)	-2(4)	-7(4)
N(3)	12(5)	22(5)	31(5)	-1(4)	-8(5)	2(4)
N(4)	27(5)	14(4)	27(5)	11(5)	4(4)	-3(4)
N(5)	19(5)	16(4)	33(5)	8(5)	7(4)	6(5)
O(1)	320(20)	23(5)	50(7)	-17(5)	69(10)	-49(9)
O(2)	144(13)	72(8)	101(10)	-11(7)	56(11)	-30(10)
O(3)	56(6)	39(5)	56(6)	1(5)	-8(5)	-15(4)
O(4)	61(7)	51(6)	41(6)	15(5)	-2(4)	-9(5)
C(1)	88(13)	35(8)	101(14)	-10(9)	54(12)	-26(9)
C(2)	34(8)	17(6)	42(8)	-9(5)	-18(6)	0(5)
C(3)	11(5)	25(6)	25(7)	0(5)	-9(4)	-7(4)
C(4)	19(7)	26(6)	21(6)	15(5)	-1(5)	-2(5)
C(5)	20(5)	33(6)	24(6)	10(5)	12(6)	13(6)
C(6)	17(6)	27(5)	39(7)	7(5)	4(6)	3(5)
C(7)	17(6)	13(5)	20(5)	-2(4)	-4(5)	3(5)
C(8)	33(8)	36(7)	8(6)	1(5)	-1(4)	-8(5)
C(9)	11(5)	21(5)	25(6)	-2(4)	6(5)	9(5)
C(10)	22(6)	27(6)	22(6)	-4(5)	5(5)	-14(5)
C(11)	27(6)	23(5)	14(6)	4(4)	-1(6)	7(6)
C(12)	14(7)	39(7)	37(7)	5(6)	2(5)	-3(5)
C(13)	8(5)	33(6)	29(6)	9(5)	9(6)	-9(6)
C(14)	21(5)	21(5)	30(6)	12(6)	-2(4)	-1(5)
C(15)	42(7)	15(5)	31(7)	-3(5)	7(7)	-23(6)
C(16)	26(7)	15(5)	27(6)	6(4)	-5(5)	1(5)

Table 5 Hydrogen coordinates (x 10^4) and isotropic displacement parameters ($Å^2$x 10^3)for **4a**.

	x	y	z	U(eq)
H(1C)	2203	4804	10656	198
H(2C)	7339	7973	8023	158
H(1A)	5945	5194	10371	89
H(1B)	3245	5730	10201	89
H(2A)	7006	5322	9717	37
H(2B)	3753	5341	9555	37
H(3A)	8506	3565	10009	25
H(4A)	7570	2185	9609	26
H(6A)	1812	2481	8764	33
H(6B)	3216	1683	9032	33
H(8A)	6370	812	8606	31
H(9A)	9966	682	8029	23
H(10A)	11133	1975	7616	28
H(12A)	11632	3701	7774	36
H(12B)	9241	3550	7406	36
H(13A)	5355	4731	7321	28
H(14A)	3790	6013	7755	29
H(16A)	7679	6082	8843	27
H(16B)	4568	6377	8674	27
H(17A)	7875	7584	8671	63
H(17B)	9873	7067	8333	63

Table 1. Crystal data and structure refinement for **4c**.

Identification code	**4c**	
Empirical formula	$C_{17} H_{21} Ag F_6 N_5 O_2 P$	
Formula weight	580.23	
Temperature	373(2) K	
Wavelength	0.71073 Å	
Crystal system	Monoclinic	
Space group	P2(1)/c	
Unit cell dimensions	a = 10.9448(14) Å	α = 90°.
	b = 22.885(3) Å	β = 92.196(2)°.
	c = 17.729(2) Å	γ = 90°.
Volume	4437.4(10) $Å^3$	
Z	8	
Density (calculated)	1.737 Mg/m^3	
Absorption coefficient	1.055 mm^{-1}	
F(000)	2320	
Crystal size	0.25 x 0.10 x 0.06 mm^3	
Theta range for data collection	1.45 to 25.00°.	
Index ranges	-13<=h<=10, -27<=k<=23, -21<=l<=21	
Reflections collected	20811	
Independent reflections	7757 [R(int) = 0.0437]	
Completeness to theta = 25.00°	99.3 %	
Absorption correction	SADABS	
Max. and min. transmission	0.9394 and 0.7784	
Refinement method	Full-matrix least-squares on F^2	
Data / restraints / parameters	7757 / 0 / 577	
Goodness-of-fit on F^2	1.058	
Final R indices [I>2sigma(I)]	R1 = 0.0956, wR2 = 0.2491	
R indices (all data)	R1 = 0.1233, wR2 = 0.2655	
Largest diff. peak and hole	2.069 and -1.230 e.$Å^{-3}$	

Table 2. Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters ($Å^2$x 10^3) for **4c**. U(eq) is defined as one third of the trace of the orthogonalized U^{ij} tensor.

	x	y	z	U(eq)
Ag(1)	5004(1)	3705(1)	7533(1)	39(1)
Ag(2)	9884(1)	3674(1)	7527(1)	36(1)
P(1)	597(3)	6187(1)	5937(2)	55(1)
P(2)	4458(3)	6145(1)	9039(2)	52(1)
F(1)	844(11)	6638(5)	5259(7)	155(5)
F(2)	-799(7)	6316(3)	5792(6)	93(3)
F(3)	461(10)	5659(4)	5360(6)	131(4)
F(4)	310(9)	5751(4)	6568(5)	108(3)
F(5)	1988(7)	6031(5)	6026(8)	152(5)
F(6)	661(9)	6724(4)	6493(6)	130(4)
F(7)	4411(9)	6663(4)	8440(7)	135(4)
F(8)	3098(7)	5955(4)	8883(8)	148(5)
F(9)	4891(9)	5700(4)	8448(5)	110(3)
F(10)	4580(10)	5647(4)	9657(6)	127(4)
F(11)	4031(11)	6601(5)	9641(8)	167(6)
F(12)	5818(6)	6326(3)	9247(5)	75(2)
N(1)	2662(7)	3631(4)	6458(5)	43(2)
N(2)	3158(7)	4519(4)	6699(4)	40(2)
N(3)	5937(7)	4798(3)	6640(4)	41(2)
N(4)	7740(7)	3860(3)	6395(5)	39(2)
N(5)	7941(7)	2941(4)	6570(5)	41(2)
N(6)	12213(7)	3569(3)	8601(5)	39(2)
N(7)	11811(6)	4462(3)	8324(4)	37(2)
N(8)	9047(6)	4794(3)	8358(4)	36(2)
N(9)	7197(7)	3883(3)	8628(4)	36(2)
N(10)	6927(7)	2964(4)	8473(4)	40(2)
O(1)	3797(13)	2986(6)	5395(6)	152(6)
O(2)	10019(11)	2351(8)	6035(13)	271(14)
O(3)	10896(16)	3020(6)	9669(7)	148(6)
O(4)	4952(11)	2491(9)	9192(15)	323(18)

C(1)	3626(13)	2755(6)	6121(9)	85(5)
C(2)	2631(13)	3021(6)	6462(8)	75(4)
C(3)	1823(8)	3983(6)	6065(5)	50(3)
C(4)	2129(9)	4527(5)	6201(5)	44(2)
C(5)	3497(8)	3968(5)	6855(5)	38(2)
C(6)	3878(8)	5024(4)	6952(6)	47(2)
C(7)	4966(9)	5133(4)	6471(6)	44(2)
C(8)	4918(10)	5559(5)	5922(7)	60(3)
C(9)	6001(10)	5629(5)	5489(7)	61(3)
C(10)	6983(10)	5283(5)	5661(6)	56(3)
C(11)	6937(9)	4879(4)	6223(6)	44(2)
C(12)	8046(8)	4490(5)	6398(6)	45(2)
C(13)	6852(11)	3600(5)	5961(7)	60(3)
C(14)	6978(9)	3015(5)	6052(6)	50(3)
C(15)	8429(11)	2384(5)	6826(7)	65(3)
C(16)	9066(15)	2079(8)	6160(15)	176(12)
C(17)	8436(7)	3475(4)	6782(5)	33(2)
C(18)	11480(20)	2754(7)	9250(20)	280(20)
C(19)	12109(12)	2943(5)	8683(7)	66(4)
C(20)	13091(8)	3912(5)	8968(6)	42(2)
C(21)	12849(8)	4469(5)	8801(5)	41(2)
C(22)	11400(7)	3912(4)	8184(6)	36(2)
C(23)	11137(8)	4982(4)	8056(6)	45(2)
C(24)	10054(8)	5105(4)	8516(6)	41(2)
C(25)	10110(10)	5532(4)	9079(7)	54(3)
C(26)	9070(10)	5622(5)	9507(6)	57(3)
C(27)	8046(10)	5289(5)	9347(6)	54(3)
C(28)	8070(8)	4876(4)	8786(5)	39(2)
C(29)	6939(8)	4511(4)	8610(6)	41(2)
C(30)	8092(10)	3618(5)	9056(6)	50(3)
C(31)	7925(9)	3025(5)	8959(6)	47(2)
C(32)	6466(8)	3496(4)	8258(5)	34(2)
C(33)	6379(11)	2407(5)	8274(7)	64(3)
C(34)	5781(14)	2154(7)	9060(14)	140(9)

Table 3. Bond lengths [Å] and angles [°] for **4c**.

Ag(1)-C(32)	2.070(9)
Ag(1)-C(5)	2.091(9)
Ag(2)-C(22)	2.064(9)
Ag(2)-C(17)	2.074(8)
P(1)-F(4)	1.541(9)
P(1)-F(5)	1.566(8)
P(1)-F(2)	1.567(7)
P(1)-F(6)	1.574(9)
P(1)-F(3)	1.587(10)
P(1)-F(1)	1.615(10)
P(2)-F(9)	1.549(8)
P(2)-F(8)	1.565(8)
P(2)-F(11)	1.576(10)
P(2)-F(12)	1.575(7)
P(2)-F(10)	1.582(9)
P(2)-F(7)	1.592(9)
N(1)-C(5)	1.370(12)
N(1)-C(3)	1.389(13)
N(1)-C(2)	1.396(15)
N(2)-C(5)	1.341(12)
N(2)-C(4)	1.403(12)
N(2)-C(6)	1.459(12)
N(3)-C(7)	1.334(12)
N(3)-C(11)	1.357(12)
N(4)-C(17)	1.337(12)
N(4)-C(13)	1.354(13)
N(4)-C(12)	1.479(12)
N(5)-C(17)	1.383(12)
N(5)-C(14)	1.383(12)
N(5)-C(15)	1.447(13)
N(6)-C(22)	1.379(12)
N(6)-C(20)	1.384(12)
N(6)-C(19)	1.446(14)
N(7)-C(22)	1.357(11)

N(7)-C(21)	1.392(11)
N(7)-C(23)	1.469(12)
N(8)-C(24)	1.334(11)
N(8)-C(28)	1.348(11)
N(9)-C(32)	1.347(12)
N(9)-C(30)	1.360(12)
N(9)-C(29)	1.466(12)
N(10)-C(32)	1.367(11)
N(10)-C(31)	1.372(12)
N(10)-C(33)	1.446(13)
O(1)-C(1)	1.411(17)
O(2)-C(16)	1.24(2)
O(3)-C(18)	1.17(2)
O(4)-C(34)	1.22(2)
C(1)-C(2)	1.405(18)
C(3)-C(4)	1.310(15)
C(6)-C(7)	1.513(13)
C(7)-C(8)	1.378(13)
C(8)-C(9)	1.445(15)
C(9)-C(10)	1.360(15)
C(10)-C(11)	1.363(13)
C(11)-C(12)	1.528(13)
C(13)-C(14)	1.356(15)
C(15)-C(16)	1.56(2)
C(18)-C(19)	1.31(3)
C(20)-C(21)	1.332(14)
C(23)-C(24)	1.491(13)
C(24)-C(25)	1.396(14)
C(25)-C(26)	1.406(15)
C(26)-C(27)	1.378(15)
C(27)-C(28)	1.373(13)
C(28)-C(29)	1.515(12)
C(30)-C(31)	1.380(14)
C(33)-C(34)	1.66(2)
C(32)-Ag(1)-C(5)	175.7(4)
C(22)-Ag(2)-C(17)	174.6(3)

F(4)-P(1)-F(5)	90.2(6)
F(4)-P(1)-F(2)	91.0(5)
F(5)-P(1)-F(2)	175.7(7)
F(4)-P(1)-F(6)	93.2(6)
F(5)-P(1)-F(6)	95.5(6)
F(2)-P(1)-F(6)	88.6(5)
F(4)-P(1)-F(3)	87.6(6)
F(5)-P(1)-F(3)	87.5(6)
F(2)-P(1)-F(3)	88.4(5)
F(6)-P(1)-F(3)	176.9(5)
F(4)-P(1)-F(1)	177.7(7)
F(5)-P(1)-F(1)	91.8(6)
F(2)-P(1)-F(1)	87.0(6)
F(6)-P(1)-F(1)	87.9(7)
F(3)-P(1)-F(1)	91.2(7)
F(9)-P(2)-F(8)	90.7(6)
F(9)-P(2)-F(11)	179.4(6)
F(8)-P(2)-F(11)	89.9(6)
F(9)-P(2)-F(12)	91.1(5)
F(8)-P(2)-F(12)	176.6(7)
F(11)-P(2)-F(12)	88.3(6)
F(9)-P(2)-F(10)	88.6(6)
F(8)-P(2)-F(10)	88.7(6)
F(11)-P(2)-F(10)	91.6(8)
F(12)-P(2)-F(10)	88.5(5)
F(9)-P(2)-F(7)	92.3(7)
F(8)-P(2)-F(7)	94.7(6)
F(11)-P(2)-F(7)	87.4(7)
F(12)-P(2)-F(7)	88.1(4)
F(10)-P(2)-F(7)	176.4(5)
C(5)-N(1)-C(3)	110.3(9)
C(5)-N(1)-C(2)	125.2(10)
C(3)-N(1)-C(2)	124.5(10)
C(5)-N(2)-C(4)	110.6(8)
C(5)-N(2)-C(6)	122.6(8)
C(4)-N(2)-C(6)	126.4(8)

C(7)-N(3)-C(11)	116.8(8)
C(17)-N(4)-C(13)	112.6(8)
C(17)-N(4)-C(12)	121.1(8)
C(13)-N(4)-C(12)	125.9(9)
C(17)-N(5)-C(14)	110.7(8)
C(17)-N(5)-C(15)	123.8(8)
C(14)-N(5)-C(15)	125.4(9)
C(22)-N(6)-C(20)	110.6(8)
C(22)-N(6)-C(19)	124.5(8)
C(20)-N(6)-C(19)	124.8(8)
C(22)-N(7)-C(21)	112.3(8)
C(22)-N(7)-C(23)	122.3(7)
C(21)-N(7)-C(23)	125.1(8)
C(24)-N(8)-C(28)	118.3(8)
C(32)-N(9)-C(30)	112.4(8)
C(32)-N(9)-C(29)	121.7(7)
C(30)-N(9)-C(29)	125.7(8)
C(32)-N(10)-C(31)	111.1(8)
C(32)-N(10)-C(33)	124.9(8)
C(31)-N(10)-C(33)	123.8(9)
C(2)-C(1)-O(1)	111.3(13)
N(1)-C(2)-C(1)	114.3(11)
C(4)-C(3)-N(1)	107.4(9)
C(3)-C(4)-N(2)	107.3(9)
N(2)-C(5)-N(1)	104.5(8)
N(2)-C(5)-Ag(1)	126.5(7)
N(1)-C(5)-Ag(1)	129.0(8)
N(2)-C(6)-C(7)	112.6(8)
N(3)-C(7)-C(8)	125.1(10)
N(3)-C(7)-C(6)	114.6(8)
C(8)-C(7)-C(6)	120.4(9)
C(7)-C(8)-C(9)	116.3(10)
C(10)-C(9)-C(8)	118.3(10)
C(9)-C(10)-C(11)	120.5(10)
N(3)-C(11)-C(10)	123.0(10)
N(3)-C(11)-C(12)	117.5(8)

C(10)-C(11)-C(12)	119.5(9)
N(4)-C(12)-C(11)	112.9(7)
N(4)-C(13)-C(14)	107.4(10)
C(13)-C(14)-N(5)	105.7(9)
N(5)-C(15)-C(16)	109.1(13)
O(2)-C(16)-C(15)	108.2(13)
N(4)-C(17)-N(5)	103.6(7)
N(4)-C(17)-Ag(2)	126.0(7)
N(5)-C(17)-Ag(2)	130.4(7)
O(3)-C(18)-C(19)	129.1(17)
C(18)-C(19)-N(6)	116.7(12)
C(21)-C(20)-N(6)	108.1(8)
C(20)-C(21)-N(7)	105.9(9)
N(7)-C(22)-N(6)	103.1(7)
N(7)-C(22)-Ag(2)	127.0(7)
N(6)-C(22)-Ag(2)	129.9(7)
N(7)-C(23)-C(24)	112.1(8)
N(8)-C(24)-C(25)	122.5(9)
N(8)-C(24)-C(23)	116.8(8)
C(25)-C(24)-C(23)	120.7(9)
C(24)-C(25)-C(26)	118.4(10)
C(27)-C(26)-C(25)	118.5(10)
C(28)-C(27)-C(26)	119.5(10)
N(8)-C(28)-C(27)	122.8(9)
N(8)-C(28)-C(29)	117.8(8)
C(27)-C(28)-C(29)	119.3(9)
N(9)-C(29)-C(28)	112.4(7)
N(9)-C(30)-C(31)	106.2(9)
N(10)-C(31)-C(30)	106.1(9)
N(9)-C(32)-N(10)	104.1(8)
N(9)-C(32)-Ag(1)	125.5(6)
N(10)-C(32)-Ag(1)	130.4(7)
N(10)-C(33)-C(34)	105.9(11)
O(4)-C(34)-C(33)	105.1(15)

Symmetry transformations used to generate equivalent atoms:

Table 4. Anisotropic displacement parameters ($Å^2 x 10^3$) for **4c**. The anisotropic displacement factor exponent takes the form: $-2\pi^2[h^2 a^{*2} U^{11} + ... + 2 h k a^* b^* U^{12}]$

	U^{11}	U^{22}	U^{33}	U^{23}	U^{13}	U^{12}
Ag(1)	33(1)	45(1)	38(1)	12(1)	-5(1)	-14(1)
Ag(2)	26(1)	46(1)	37(1)	-9(1)	-6(1)	8(1)
P(1)	40(2)	52(2)	72(2)	2(1)	-7(1)	5(1)
P(2)	35(1)	40(2)	82(2)	-6(1)	-4(1)	0(1)
F(1)	176(11)	130(9)	163(10)	80(8)	84(9)	46(8)
F(2)	53(4)	64(5)	161(9)	-6(5)	-38(5)	3(3)
F(3)	167(10)	116(8)	107(7)	-30(6)	-29(7)	73(7)
F(4)	129(7)	102(7)	94(6)	35(5)	27(5)	48(6)
F(5)	46(5)	156(9)	255(14)	50(10)	5(7)	39(6)
F(6)	137(8)	78(6)	169(9)	-49(6)	-91(7)	30(5)
F(7)	112(7)	104(7)	182(10)	65(7)	-85(7)	-25(6)
F(8)	49(5)	98(7)	296(15)	-27(9)	-27(7)	-27(5)
F(9)	115(7)	121(7)	95(6)	-55(6)	22(5)	-20(6)
F(10)	143(9)	124(8)	112(7)	59(6)	-19(6)	-58(7)
F(11)	137(9)	127(9)	243(15)	-98(9)	92(10)	-27(7)
F(12)	47(4)	61(4)	115(6)	23(4)	-29(4)	0(3)
N(1)	39(4)	49(5)	41(5)	9(4)	0(4)	-25(4)
N(2)	36(4)	48(5)	37(5)	11(4)	-1(3)	-6(4)
N(3)	32(4)	38(4)	50(5)	11(4)	-9(4)	-8(3)
N(4)	34(4)	38(5)	45(5)	6(4)	-5(4)	-10(3)
N(5)	33(4)	44(5)	46(5)	1(4)	6(4)	-8(4)
N(6)	28(4)	40(5)	47(5)	-10(4)	-14(3)	11(3)
N(7)	19(3)	47(5)	44(5)	3(4)	-3(3)	3(3)
N(8)	27(4)	41(4)	40(4)	-10(3)	-3(3)	6(3)
N(9)	24(4)	44(5)	39(5)	-6(3)	-8(3)	2(3)
N(10)	34(4)	52(5)	32(4)	7(4)	1(3)	-8(4)
O(1)	209(15)	168(12)	79(8)	5(8)	10(8)	141(11)
O(2)	71(8)	300(20)	450(30)	-320(20)	115(13)	-79(11)
O(3)	226(17)	106(10)	112(10)	8(8)	2(10)	-78(11)
O(4)	59(7)	350(30)	570(40)	390(30)	81(14)	53(12)
C(1)	78(10)	66(9)	107(12)	15(8)	-26(9)	-24(8)

C(2)	73(9)	73(9)	80(10)	-10(7)	4(7)	-34(7)
C(3)	27(5)	92(9)	30(5)	16(6)	-8(4)	-11(5)
C(4)	41(5)	58(7)	34(5)	7(5)	-1(4)	-3(5)
C(5)	32(5)	56(6)	27(5)	13(4)	1(4)	-16(5)
C(6)	37(5)	41(6)	62(7)	-5(5)	-1(5)	-5(4)
C(7)	37(5)	37(5)	56(6)	10(5)	-6(5)	-9(4)
C(8)	46(6)	51(7)	80(8)	26(6)	-25(6)	-10(5)
C(9)	45(6)	61(7)	75(8)	36(6)	-8(6)	-18(5)
C(10)	45(6)	63(7)	59(7)	27(6)	-11(5)	-19(5)
C(11)	42(5)	47(6)	43(6)	10(5)	-9(4)	-12(5)
C(12)	28(5)	63(7)	44(6)	10(5)	-8(4)	-11(5)
C(13)	55(7)	62(7)	59(7)	11(6)	-25(6)	-16(6)
C(14)	44(6)	58(7)	47(6)	-2(5)	-21(5)	-13(5)
C(15)	72(8)	38(6)	83(9)	-12(6)	-34(7)	10(6)
C(16)	66(11)	105(14)	350(30)	-116(19)	-72(16)	21(10)
C(17)	21(4)	44(5)	33(5)	3(4)	0(4)	-2(4)
C(18)	180(20)	35(9)	630(70)	70(20)	290(40)	46(11)
C(19)	77(8)	49(7)	71(8)	-24(6)	-38(7)	32(6)
C(20)	22(4)	61(7)	45(6)	-2(5)	-3(4)	12(4)
C(21)	21(4)	60(7)	42(6)	-5(5)	-10(4)	-3(4)
C(22)	19(4)	31(5)	58(6)	-7(4)	2(4)	2(4)
C(23)	31(5)	45(6)	58(6)	2(5)	-5(4)	-5(4)
C(24)	37(5)	31(5)	55(6)	-10(4)	-13(4)	7(4)
C(25)	44(6)	37(6)	78(8)	-3(5)	-12(5)	9(5)
C(26)	53(7)	59(7)	59(7)	-28(6)	-9(5)	15(5)
C(27)	46(6)	62(7)	53(7)	-16(5)	-11(5)	23(5)
C(28)	33(5)	40(5)	44(6)	-5(4)	-12(4)	6(4)
C(29)	29(5)	41(6)	51(6)	-12(5)	-5(4)	9(4)
C(30)	49(6)	52(6)	46(6)	-12(5)	-20(5)	13(5)
C(31)	48(6)	49(6)	43(6)	1(5)	-10(5)	10(5)
C(32)	32(5)	39(5)	32(5)	12(4)	10(4)	3(4)
C(33)	62(7)	42(6)	87(9)	14(6)	-20(7)	-13(6)
C(34)	63(10)	65(10)	280(30)	22(14)	-70(14)	5(8)

Table 5. Hydrogen coordinates (x 10^4) and isotropic displacement parameters ($Å^2$x 10^3) for **4c**.

	x	y	z	U(eq)
H(1C)	4050	2729	5119	228
H(2C)	10284	2245	5631	407
H(3B)	10792	2824	10048	222
H(4B)	4569	2367	9547	485
H(1A)	3483	2337	6082	102
H(1B)	4361	2816	6434	102
H(2A)	1881	2893	6203	90
H(2B)	2609	2888	6981	90
H(3A)	1166	3856	5760	60
H(4A)	1738	4858	6005	53
H(6A)	4163	4962	7471	56
H(6B)	3359	5368	6940	56
H(8A)	4227	5789	5835	72
H(9A)	6025	5903	5103	73
H(10A)	7692	5324	5393	67
H(12A)	8657	4562	6027	54
H(12B)	8400	4594	6890	54
H(13A)	6265	3789	5656	71
H(14A)	6513	2723	5814	60
H(15A)	7774	2139	7001	78
H(15B)	9015	2444	7243	78
H(16A)	9257	1676	6291	211
H(16B)	8526	2079	5713	211
H(18A)	10919	2466	9030	331
H(18B)	12059	2537	9567	331
H(19A)	11739	2787	8220	80
H(19B)	12928	2782	8737	80
H(20A)	13737	3778	9277	51
H(21A)	13286	4796	8970	49
H(23A)	10867	4924	7534	54
H(23B)	11680	5317	8076	54

H(25A)	10816	5751	9169	64
H(26A)	9075	5901	9889	69
H(27A)	7343	5342	9617	65
H(29A)	6327	4600	8974	49
H(29B)	6606	4616	8113	49
H(30A)	8697	3800	9355	60
H(31A)	8394	2727	9178	56
H(33A)	6991	2139	8096	77
H(33B)	5747	2456	7880	77
H(34A)	5471	1761	8985	167
H(34B)	6389	2151	9472	167

Table 3. The effect of chloride as silver chloride in the bacteriocidal activity of the silver compounds

Tested Ag compounds (% w/v)	*E- coli* (Days)						*P. aeruginosa* (Days)						*S. aureus* (Days)					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
4a																		
0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.03	-	-	+				-	-	+				-	+				
4b																		
0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.03	-	-	+				-	-	+				-	+				
$AgNO_3$																		
0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.03	-	-	-	+			-	-	+				-	-	+			

20 μl per day of freshly grown organism was added to each culture. + = growth, - = no growth.

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Table 4. The effect of the amount of silver in the bacteriocidal activity of the test silver compounds

Tested Ag compounds (% w/v)	*E- coli* (Days)						*P. aeruginosa* (Days)						*S. aureus* (Days)					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
4a																		
1.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.08	-	-	-	+			-	-	-	-	+		-	-	-	+		
4b																		
1.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.09	-	-	-	-	+		-	-	-	-	-	+	-	-	-	+		
$AgNO_3$													-	-	-	-	-	-
0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+			
0.03	-	-	+				-	-	+									

20 μl per day of freshly grown organism was added to each culture. + = growth, - = no growth.

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