$HCs_3[H_3O]Cl_5$	*hP*20	(176) $P6_3/m$ – h^2fe

$CsCl{\cdot}0.33H_3OHCl_2$ [1]
Structural features: Cl-H-Cl linear units arranged in infinite chains and directly superposed $:O(\text{-}H\cdots Cl)_3$ ψ-tetrahedra (split O site).

Schroeder L.W., Ibers J.A. (1968) [1]
$Cl_5Cs_3H_3O$
a = 1.028, c = 0.678 nm, c/a = 0.660, V = 0.6205 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Cl1	6*h*	*m*..	0.2654	0.2727	$^1/_4$		non-colinear $(OH_3)_2$
Cs2	6*h*	*m*..	0.3855	0.0151	$^1/_4$		tricapped trigonal prism Cl_9
Cl3	4*f*	3..	$^1/_3$	$^2/_3$	0.0181		single atom Cl
$(OH_3)4$	4*e*	3..	0	0	0.1104	0.5	colinear $(OH_3)_2$

Transformation from published data: *y*,*x*,-*z*
Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.093

Remarks: H not belonging to H_3O was not located. Short interatomic distances for partly occupied site(s). Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments. Space group (173) $P6_3$ was tested and rejected.

References: [1] Schroeder L.W., Ibers J.A. (1968), Inorg. Chem. 7, 594-599.