$Cr_3[CF_3CO_2]_6[NO_3]O[H_2O]_5$	*hP*146	(176) $P6_3/m - i^{10}h^3fda$

$[Cr_3(\mu_3\text{-}O)(CF_3COO)_6(H_2O)_3](NO_3)(H_2O)_2$ [1]
Structural features: $Cr_3O(H_2O)_3(O_2CCF_3)_6$ units (a ring of three vertex-linked $Cr(O_5[OH_2])$ octahedra sharing vertices with three $O_2C\text{-}CF_3$ units on each side; partial rotational disorder for CF_3) in a Mg-type (h.c.p.) arrangement; NO_3 trigonal units (partial orientational disorder) and additional H_2O between the units.

Glazunova T.Y. et al. (2004) [1]
$C_{12}Cr_3F_{18}H_{10.02}NO_{21}$
a = 0.9893, c = 1.9366 nm, c/a = 1.958, V = 1.6414 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
F1	12*i*	1	0.099	0.374	0.0788	0.3	
F2	12*i*	1	0.1244	0.3298	0.1008	0.7	
F3	12*i*	1	0.174	0.048	0.088	0.3	
F4	12*i*	1	0.2132	0.083	0.0657	0.7	
C5	12*i*	1	0.2971	0.0277	0.08859		7-vertex polyhedron F_6C
F6	12*i*	1	0.386	0.111	0.0401	0.3	
F7	12*i*	1	0.3892	0.0404	0.0383	0.7	
O8	12*i*	1	0.38952	0.22632	0.17386		single atom C
C9	12*i*	1	0.3918	0.1087	0.15414		non-coplanar triangle O_2C
O10	12*i*	1	0.46348	0.04679	0.17866		single atom C
O11	6*h*	*m*..	0.0295	0.1378	$^1/_4$		single atom N
O12	6*h*	*m*..	0.3096	0.4034	$^1/_4$		single atom Cr
Cr13	6*h*	*m*..	0.49678	0.37365	$^1/_4$		octahedron O_6
O14	4*f*	3..	$^1/_3$	$^2/_3$	0.1718		non-coplanar triangle O_3
O15	2*d*	-6..	$^2/_3$	$^1/_3$	$^1/_4$		coplanar triangle Cr_3
N16	2*a*	-6..	0	0	$^1/_4$		coplanar triangle O_3
H17	12*i*	1	0.304	0.591	0.1433	0.67	
H18	12*i*	1	0.313	0.471	0.219	0.5	
H19	6*h*	*m*..	0.229	0.326	$^1/_4$		

Transformation from published data: origin shift 0 0 $^1/_2$
Experimental: single crystal, diffractometer, X-rays, R = 0.036, T = 293 K

Remarks: Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments. Short interatomic distances for partly occupied site(s). We assume that in [1] the chemical formula is misprinted as $[Cr_3(\mu_3\text{-}O)(CF_3COO)_6(H_2O)_3](NO_3)(H_2O)$ instead of $[Cr_3(\mu_3\text{-}O)\_(CF_3COO)_6(H_2O)_3](NO_3)(H_2O)_2$ (given in the cif file, in agreement with the refinement).

References: [1] Glazunova T.Y., Boltalin A.I., Troyanov S.I. (2004), Mendeleev Commun. 14, 141-143.