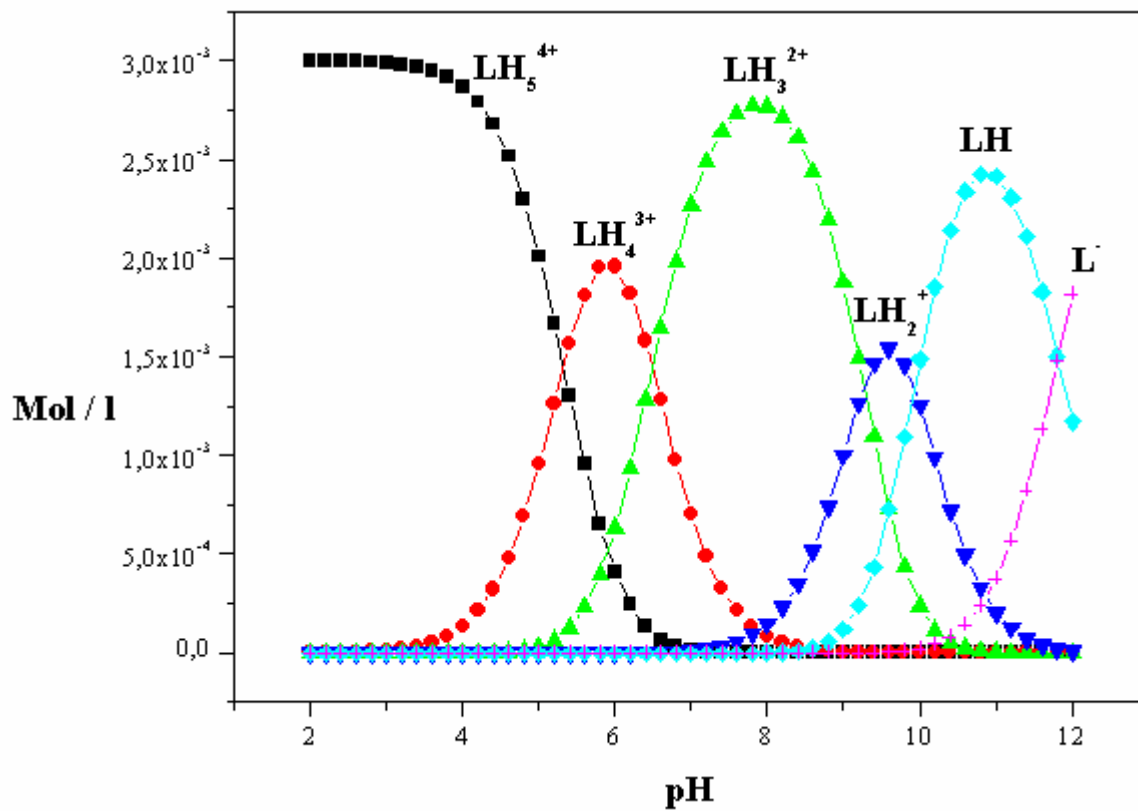
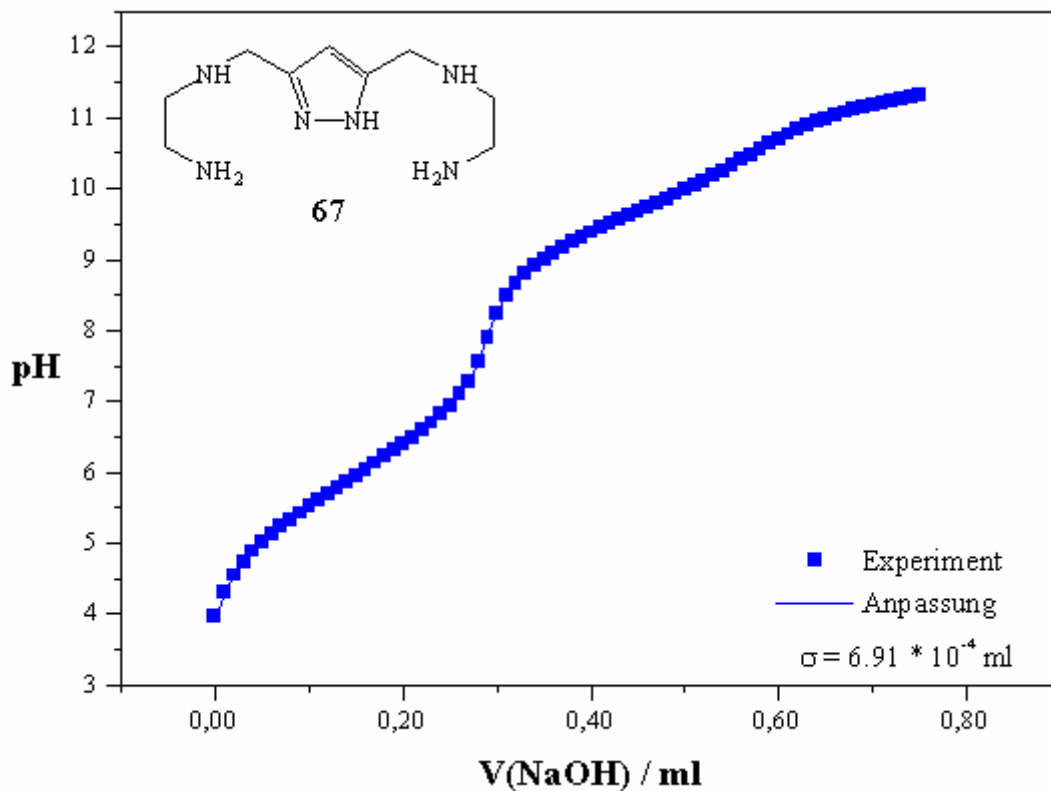
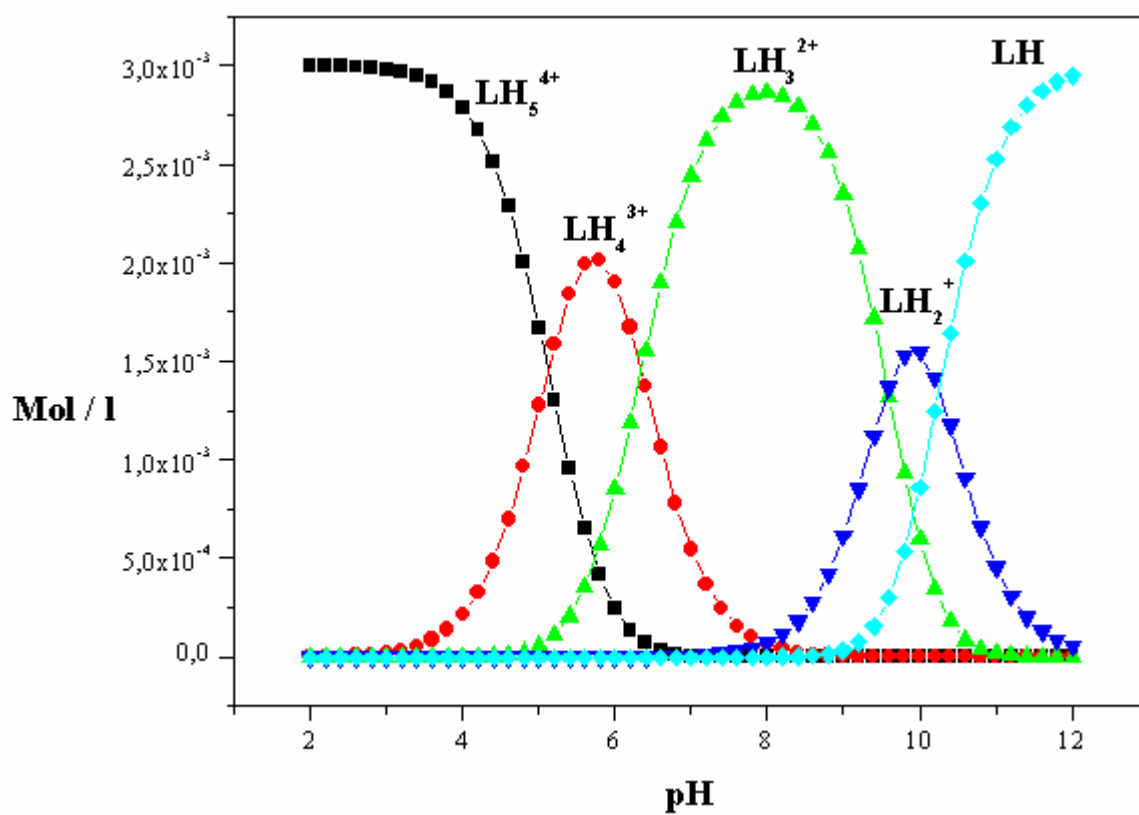
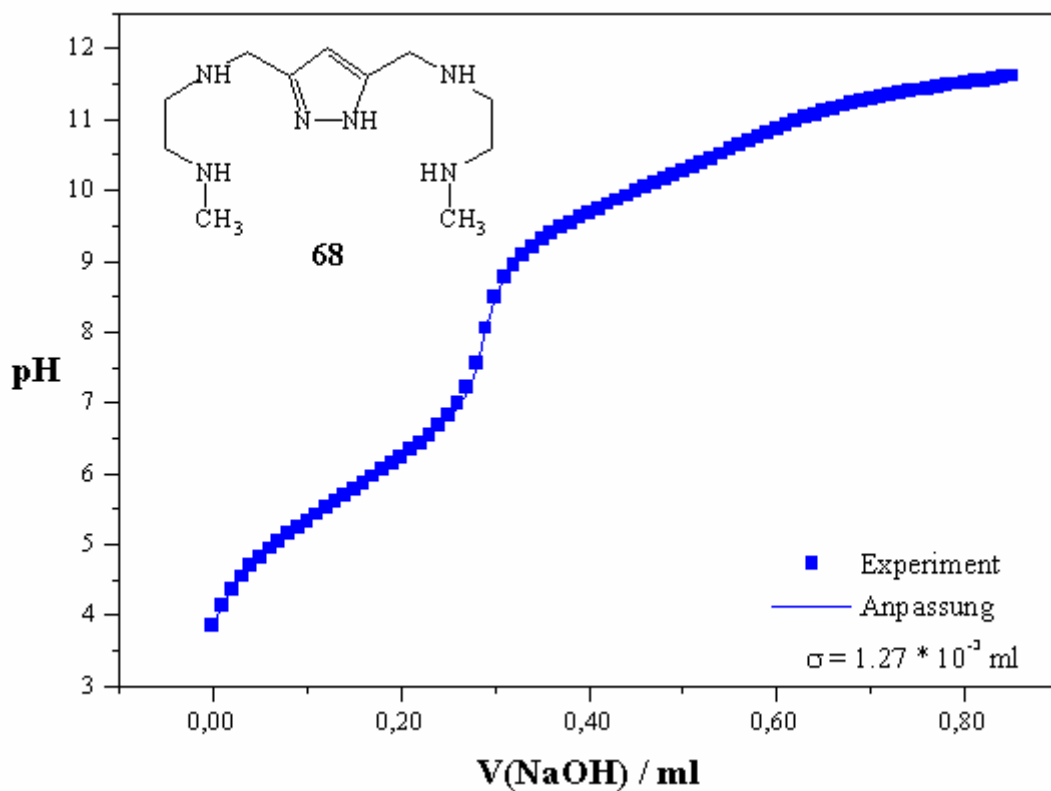


## **Supplementary Material:**

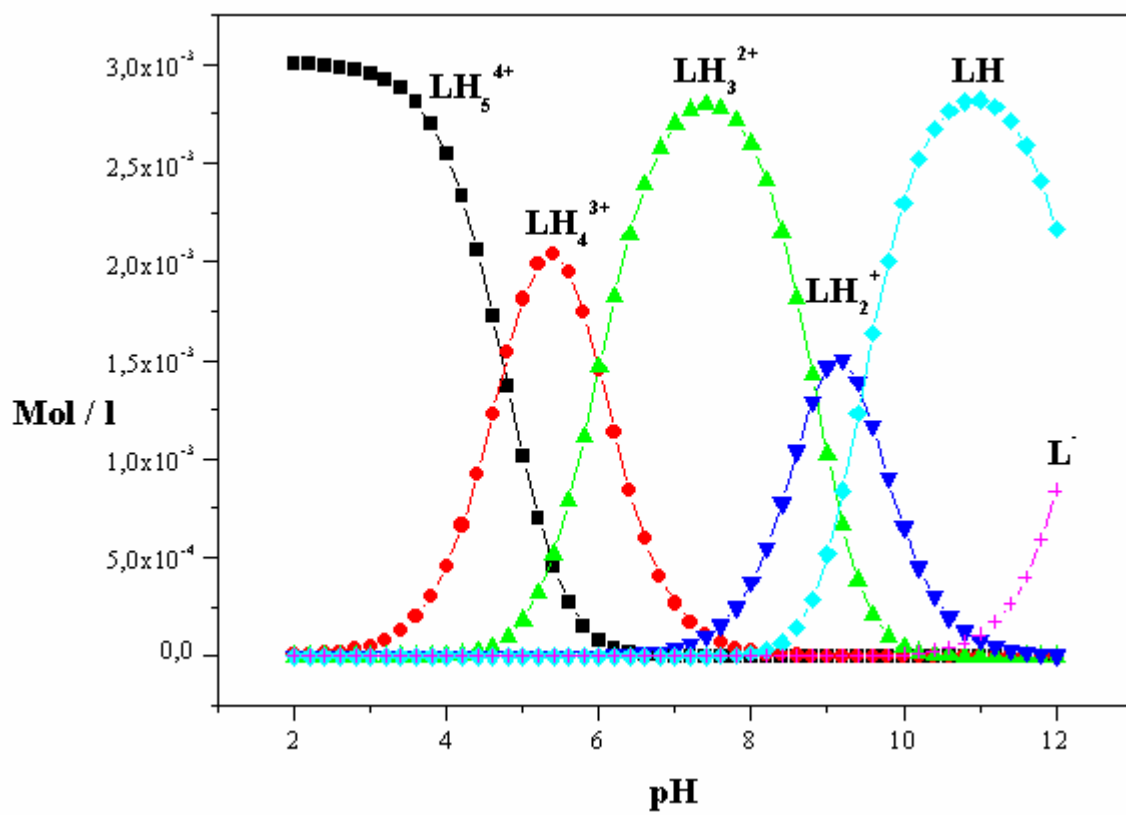
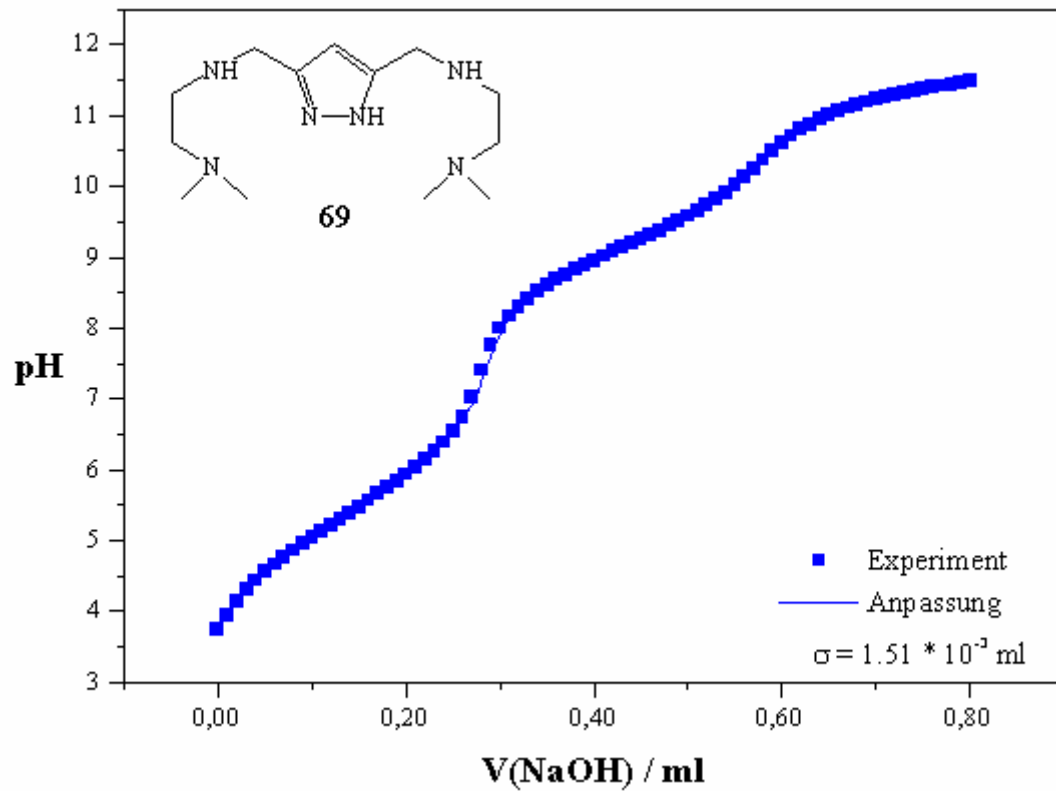
Titration curves of the ligands and of their  $\text{Cu}^{2+}$  ( $\text{Zn}^{2+}$ ) complexes



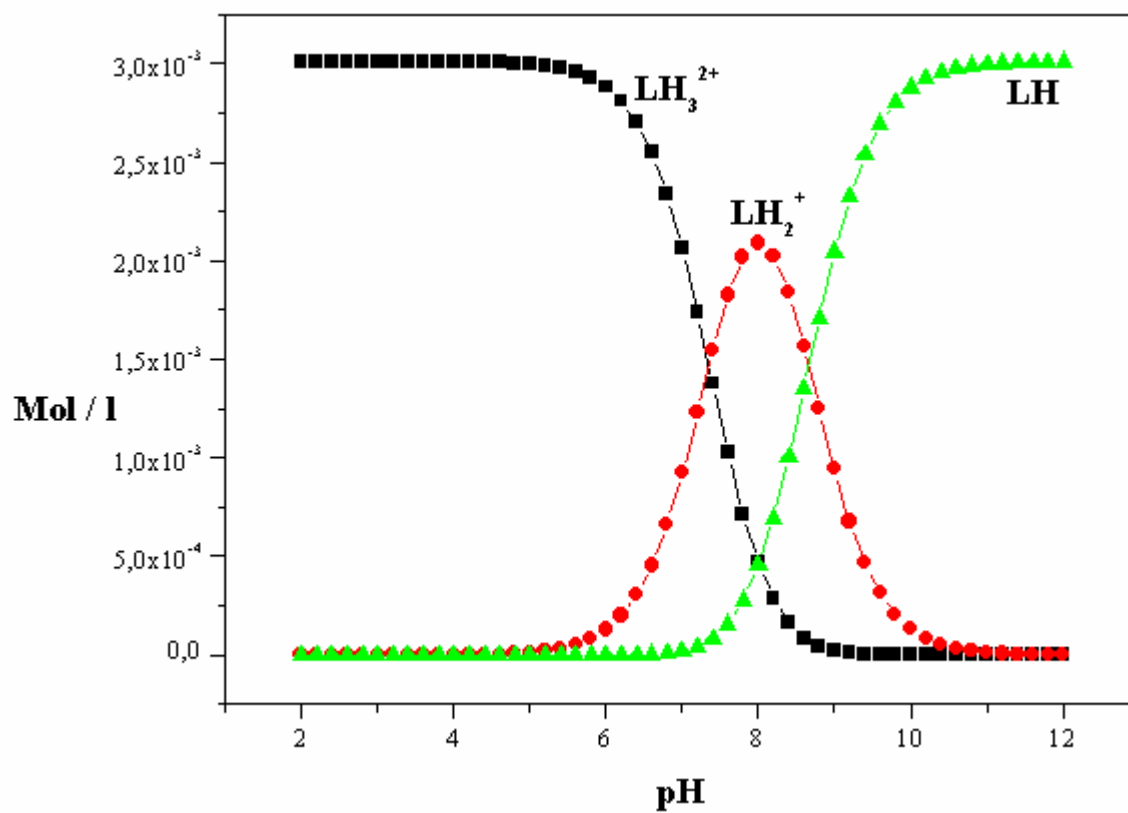
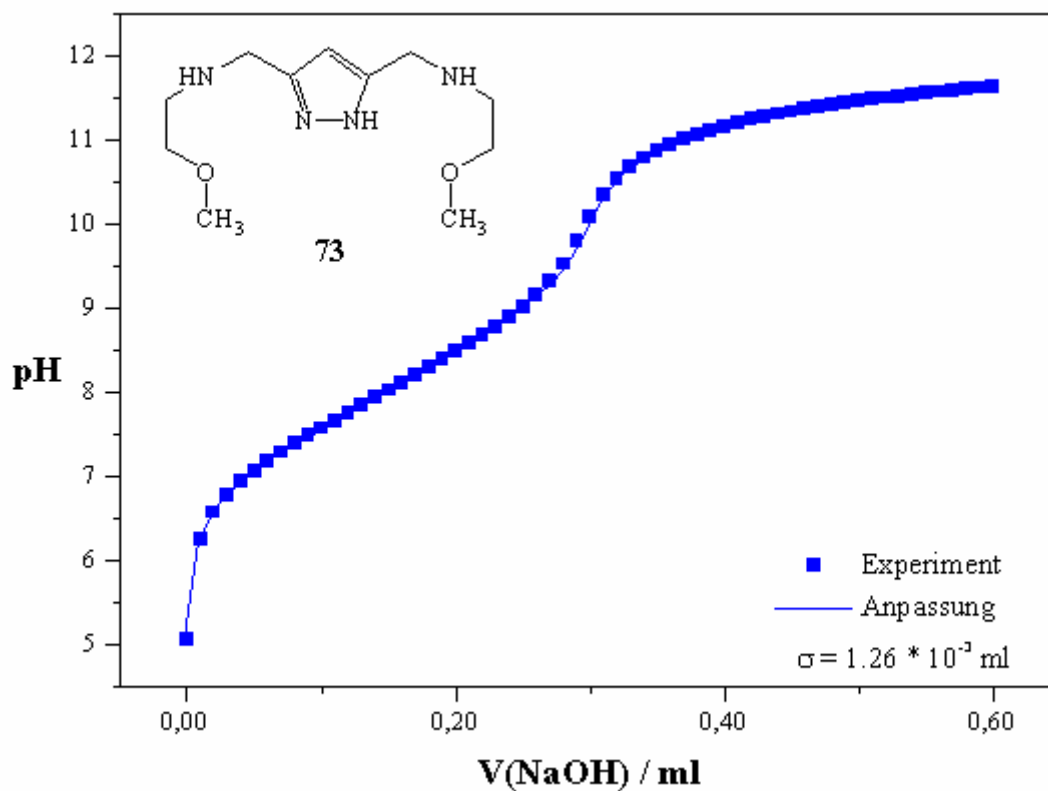
Titration curve (top) and species distribution (below) of ligand **19**,  $[\text{L}] = 3.0 \cdot 10^{-3} \text{ M}$ .



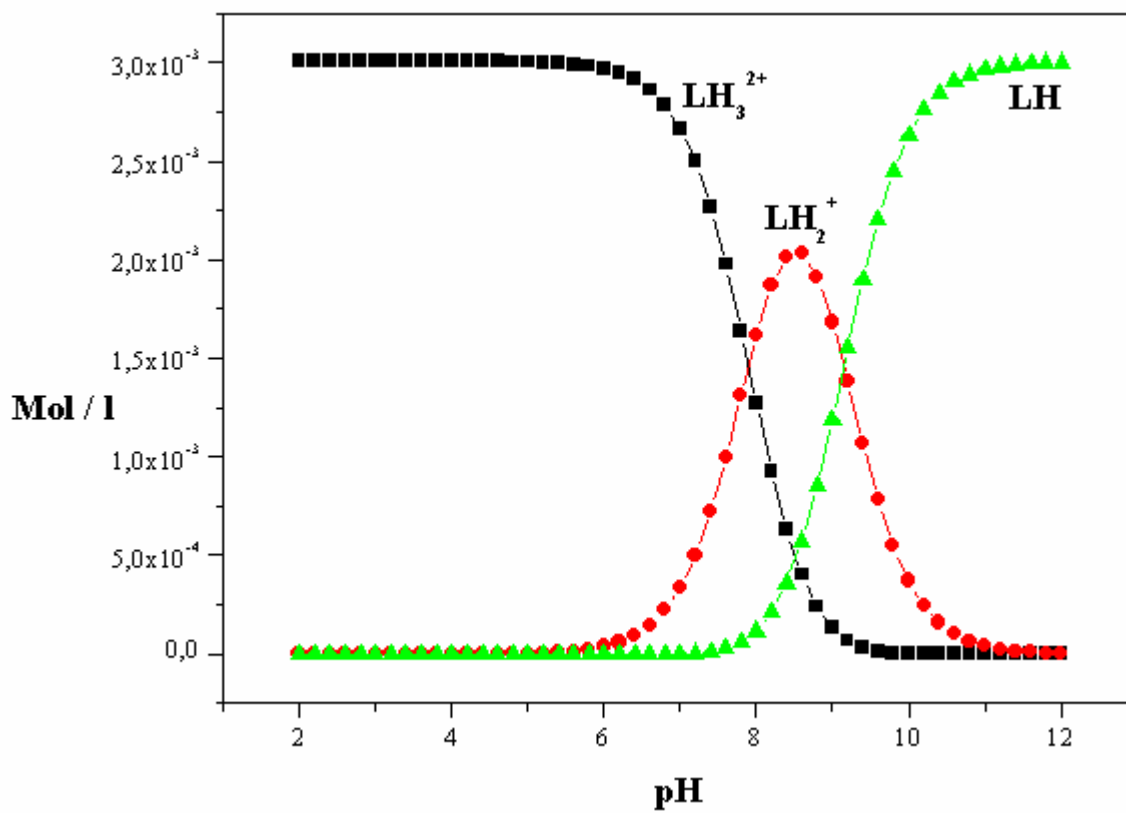
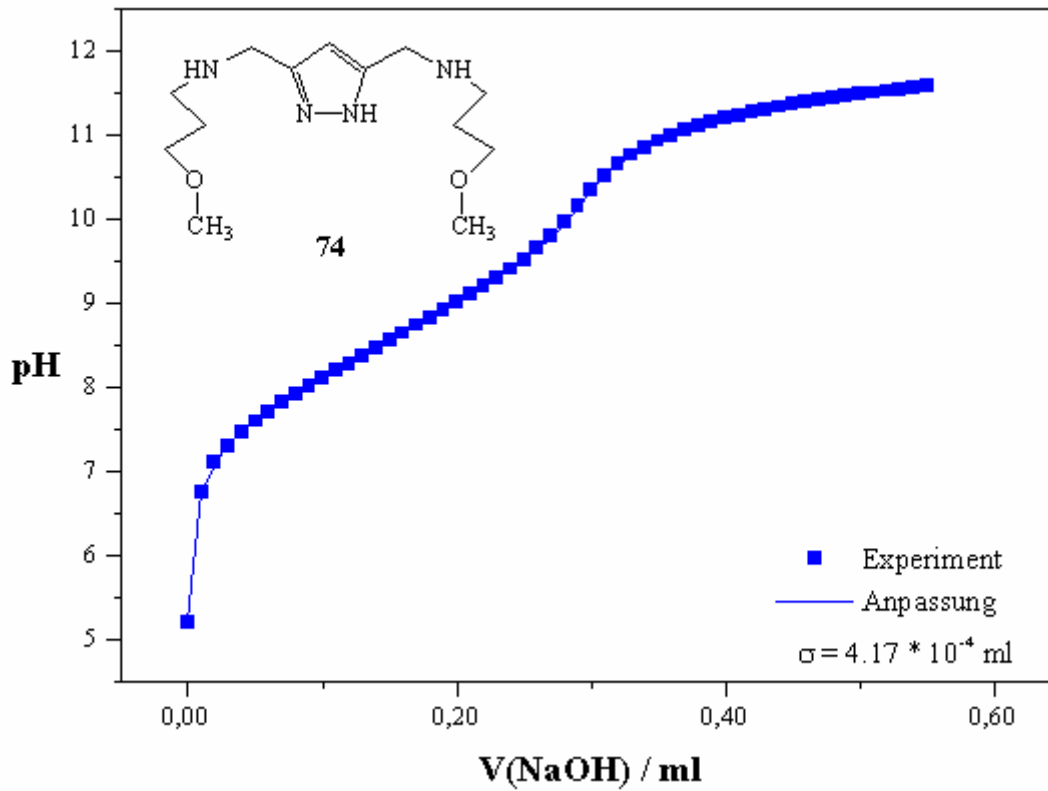
Titration curve (top) and species distribution (below) of ligand **18**,  $[L] = 3.0 \cdot 10^{-3}$  M.



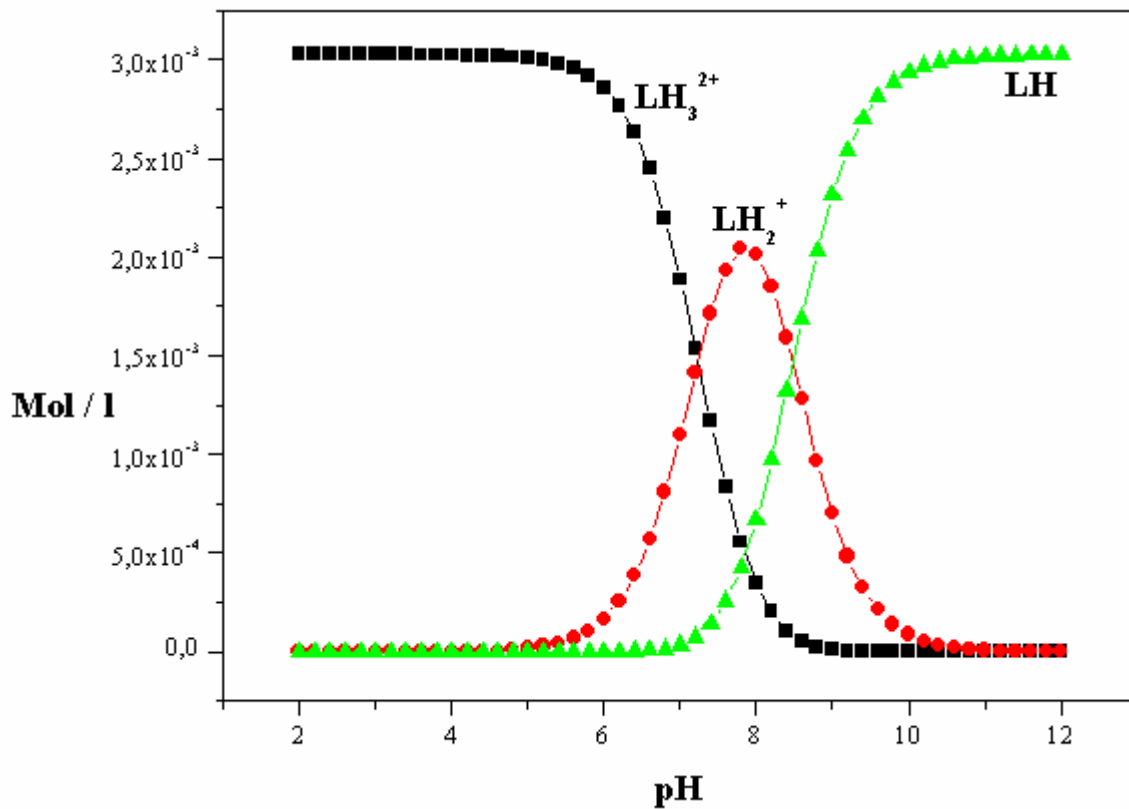
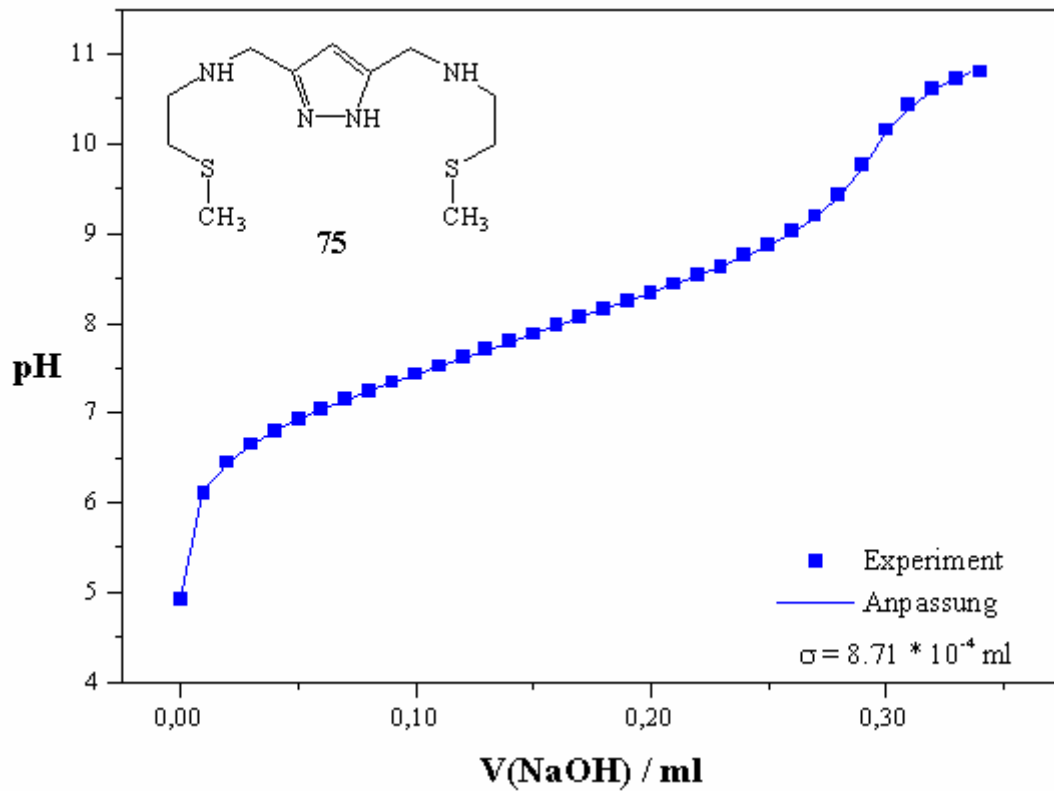
Titration curve (top) and species distribution (below) of ligand **16**,  $[L] = 3.0 \cdot 10^{-3} \text{ M}$ .



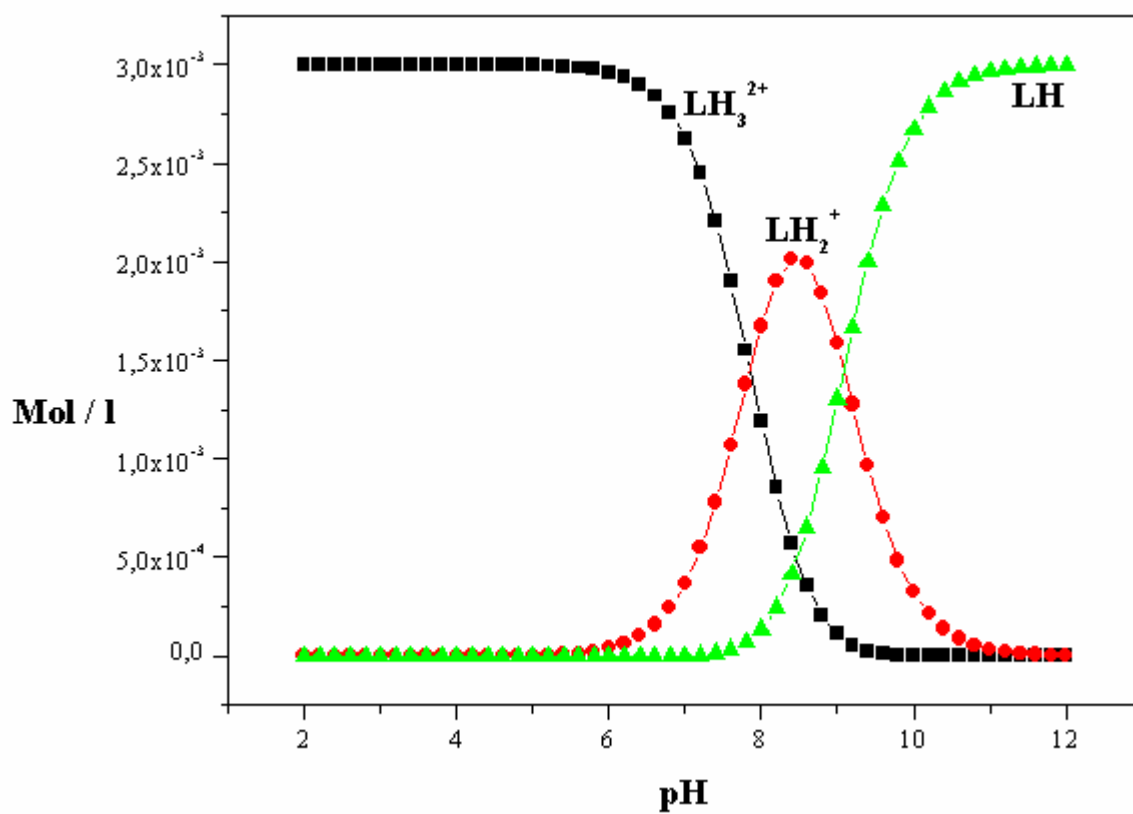
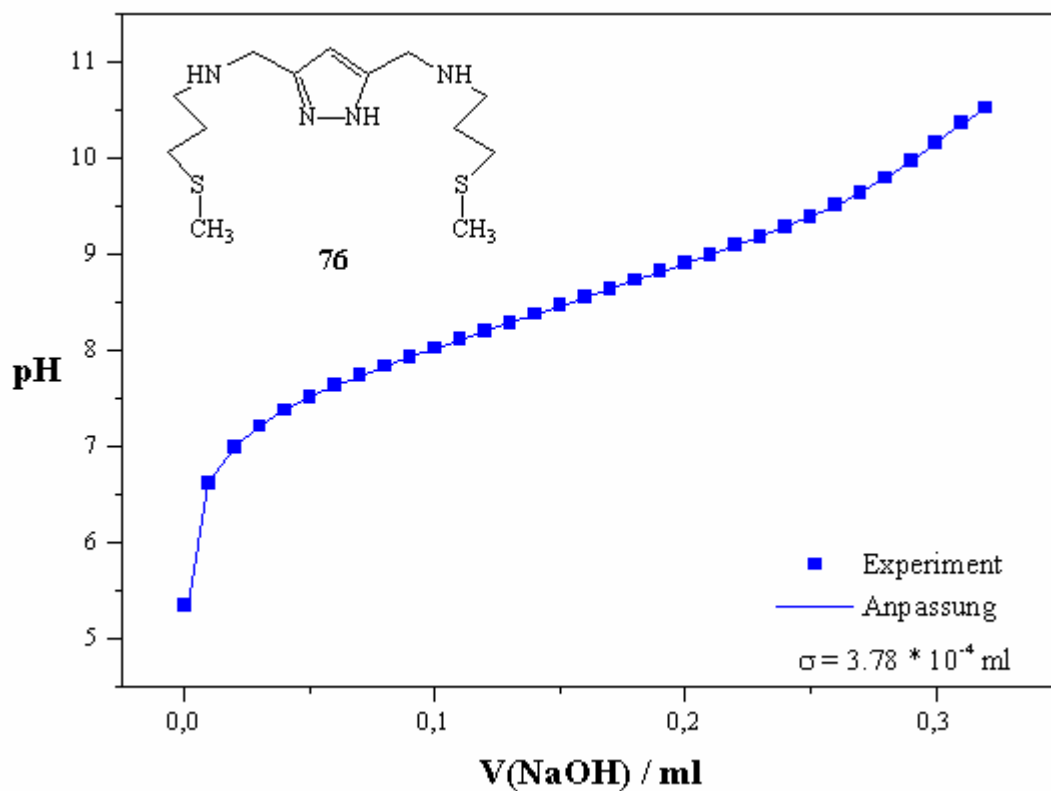
Titration curve (top) and species distribution (below) of ligand **20**,  $[L] = 3.0 \cdot 10^{-3} \text{ M}$ .



Titration curve (top) and species distribution (below) of ligand 21,  $[L] = 3.0 \cdot 10^{-3}$  M.

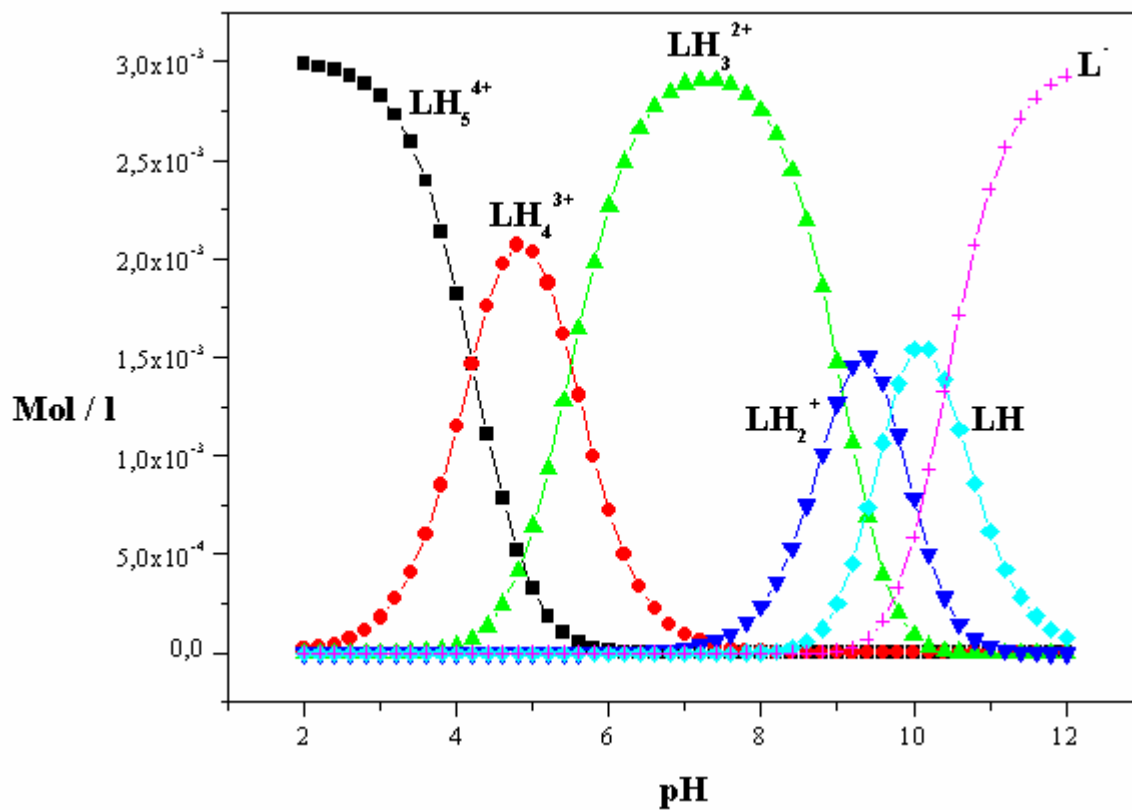
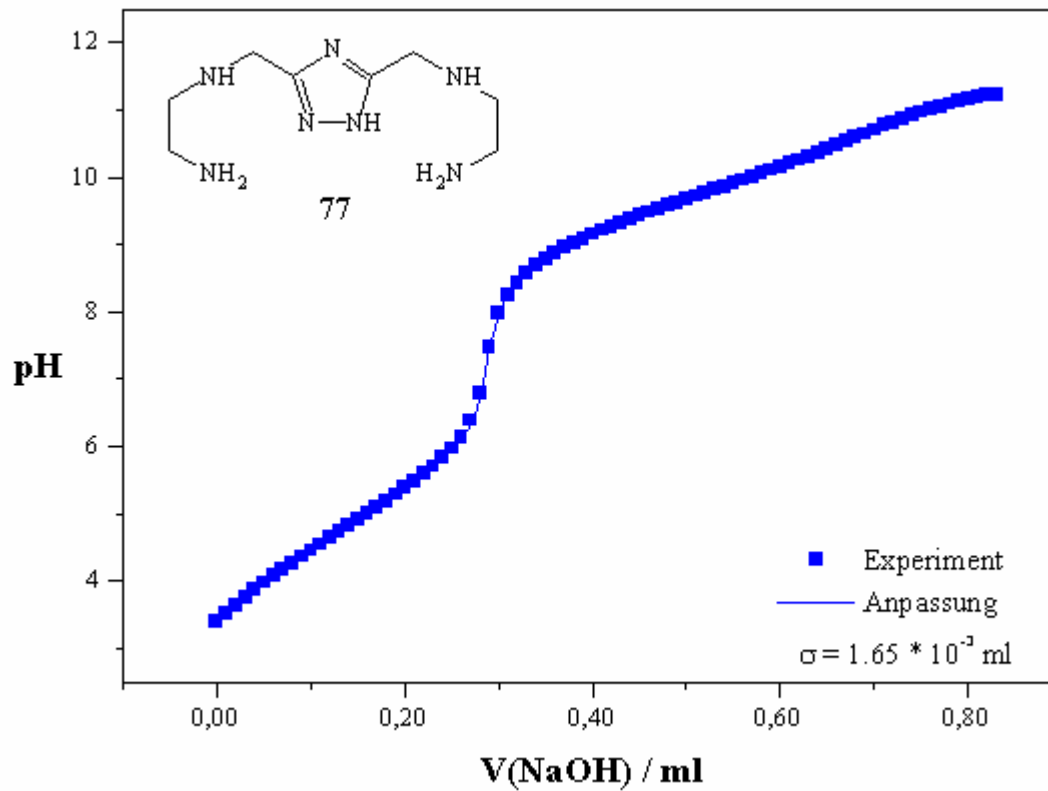


Titration curve (top) and species distribution (below) of ligand 24,  $[\text{L}] = 3.0 \cdot 10^{-3} \text{ M}$ .

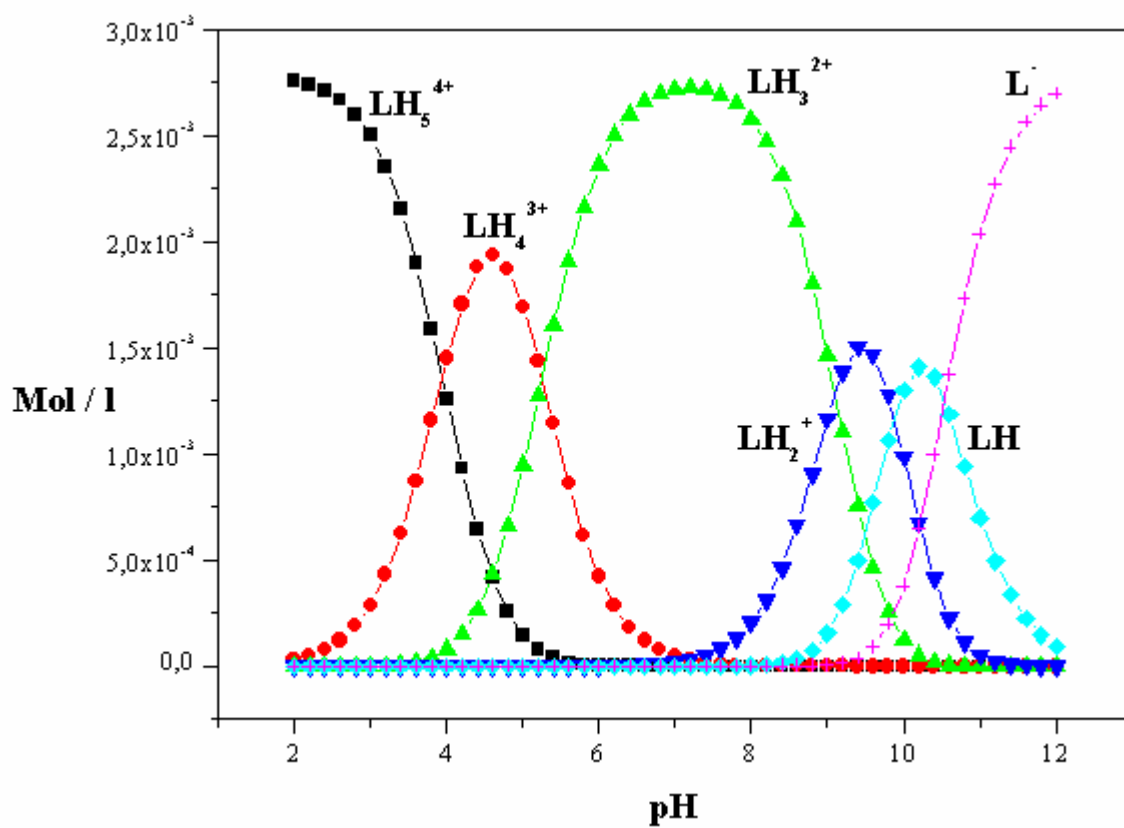
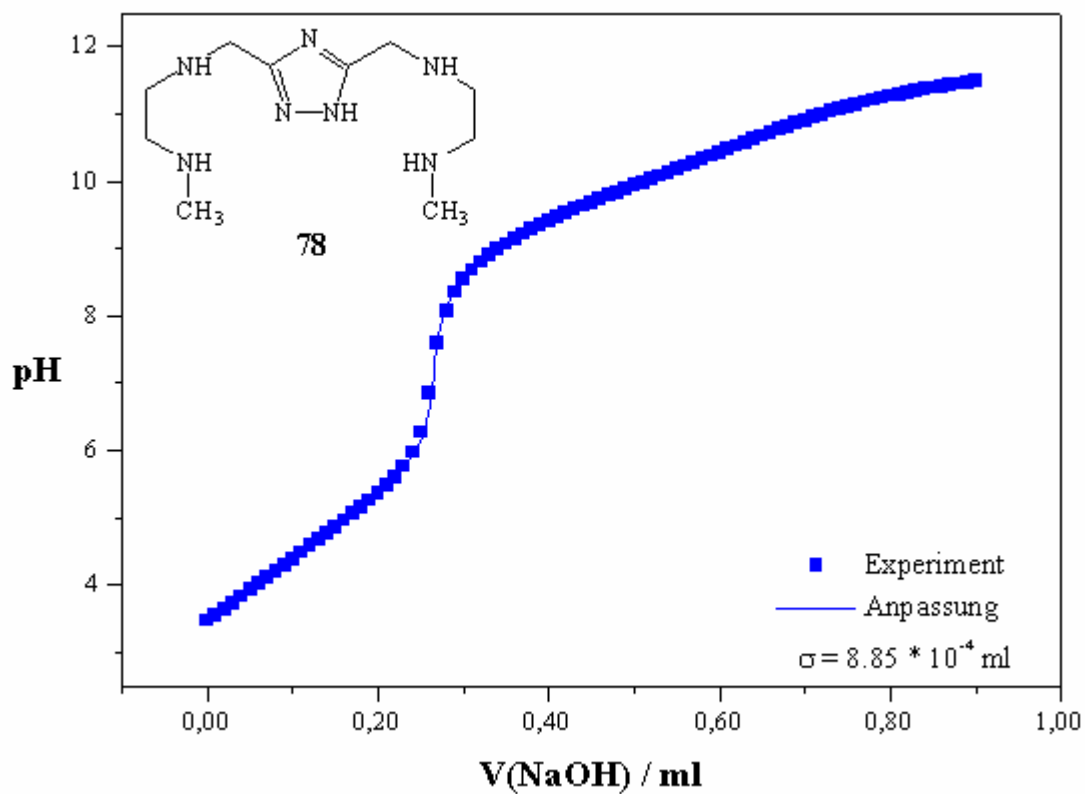


Titration curve (top) and species distribution (below) of ligand **25**,  $[L] = 3.0 \cdot 10^{-3} \text{ M}$ .

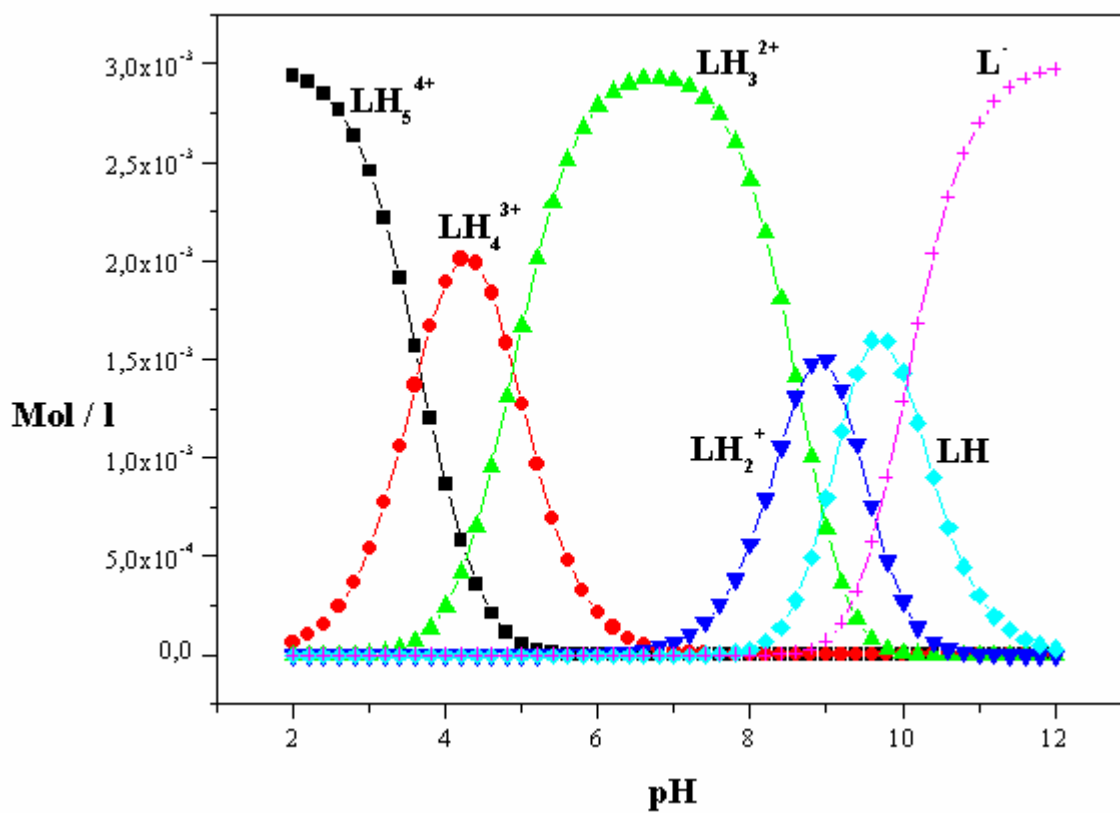
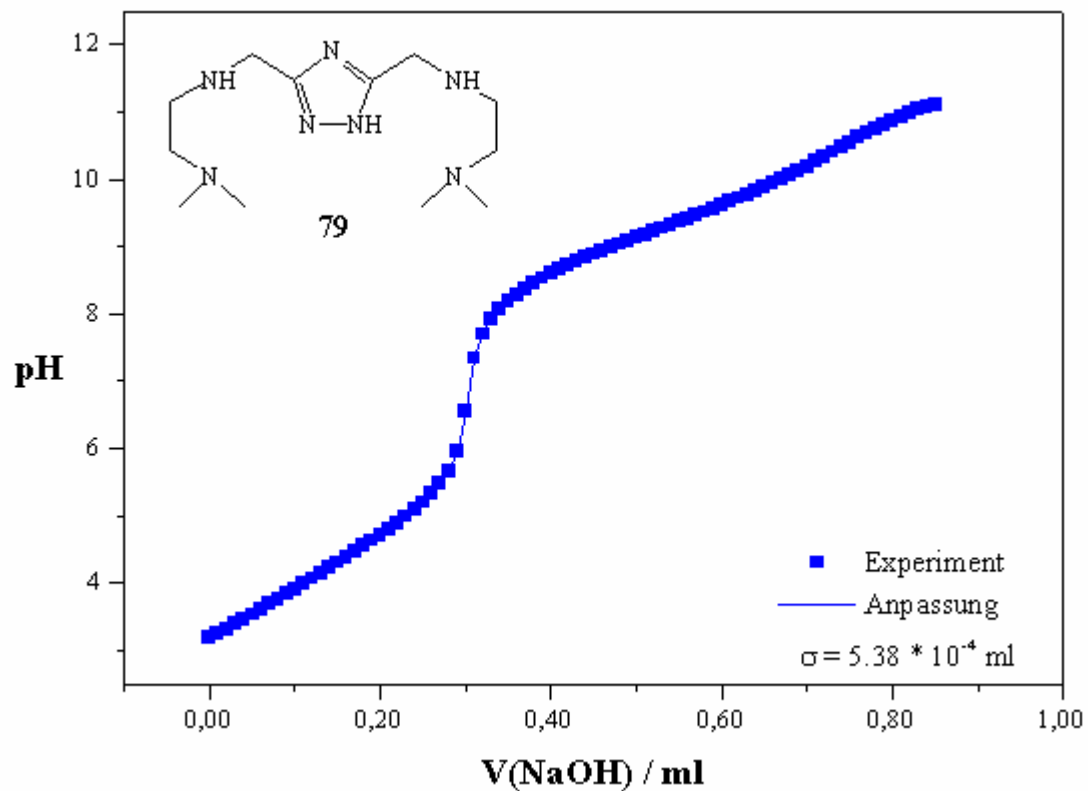




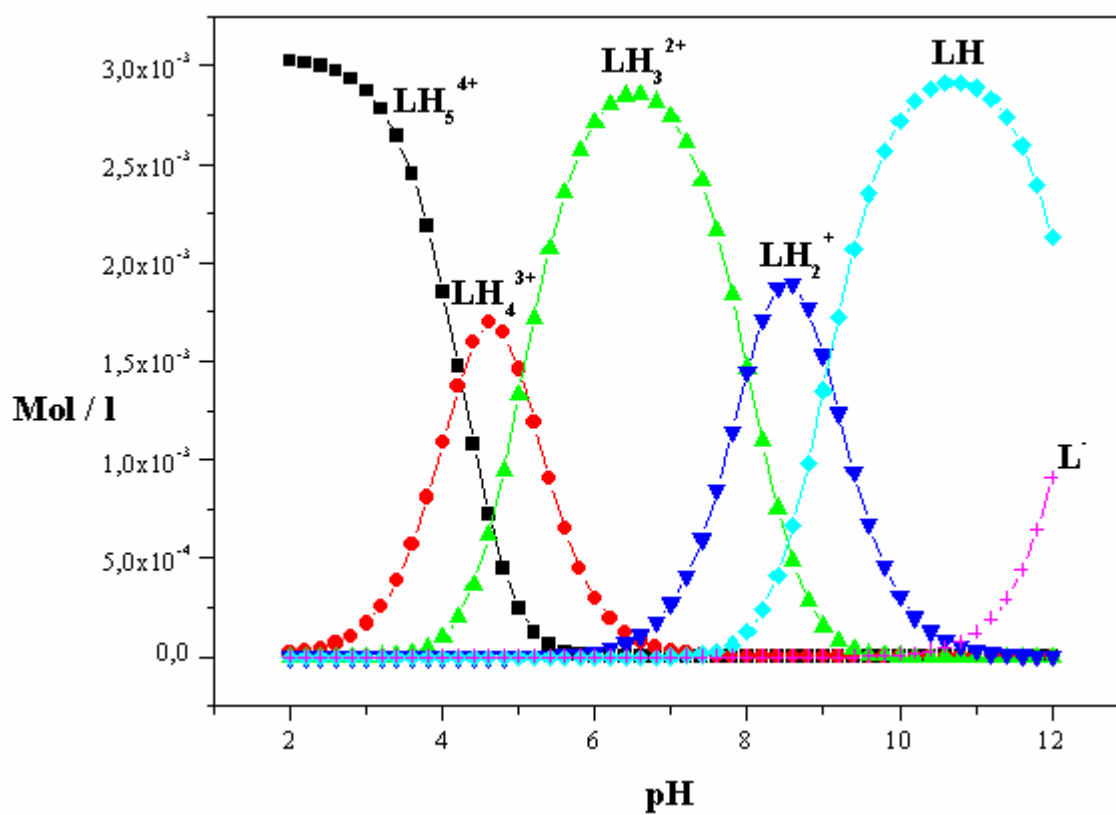
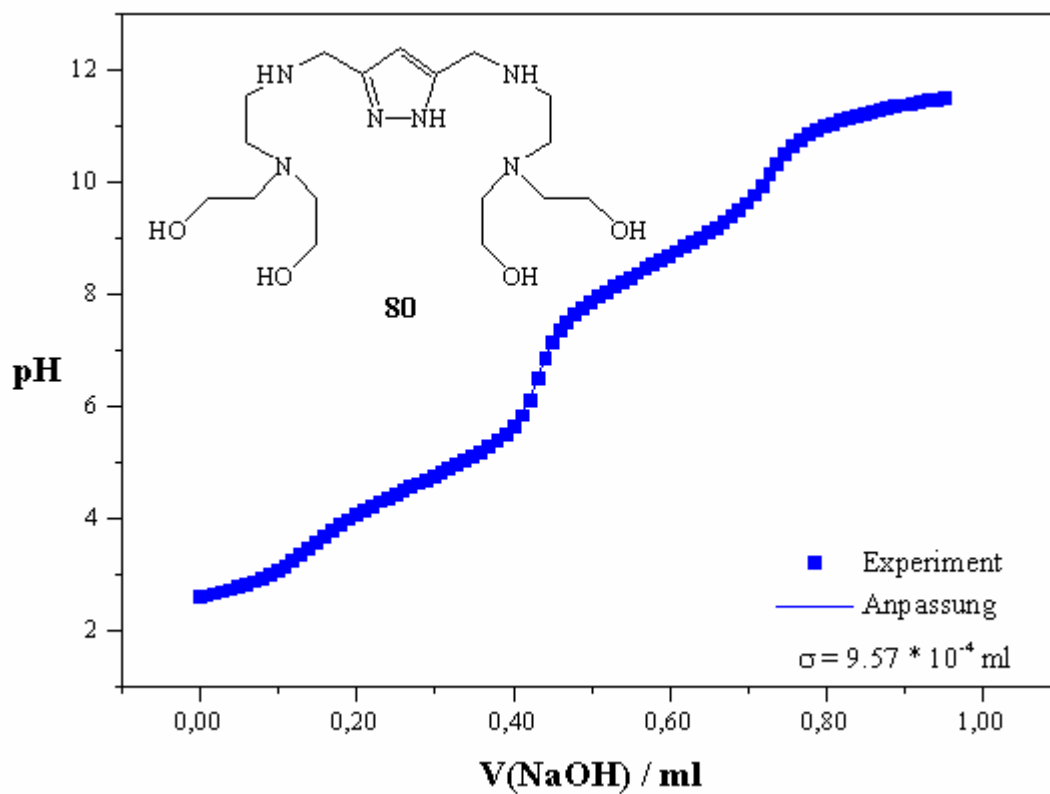
Titration curve (top) and species distribution (below) of ligand **33**,  $[L] = 3.0 \cdot 10^{-3} \text{ M}$ .



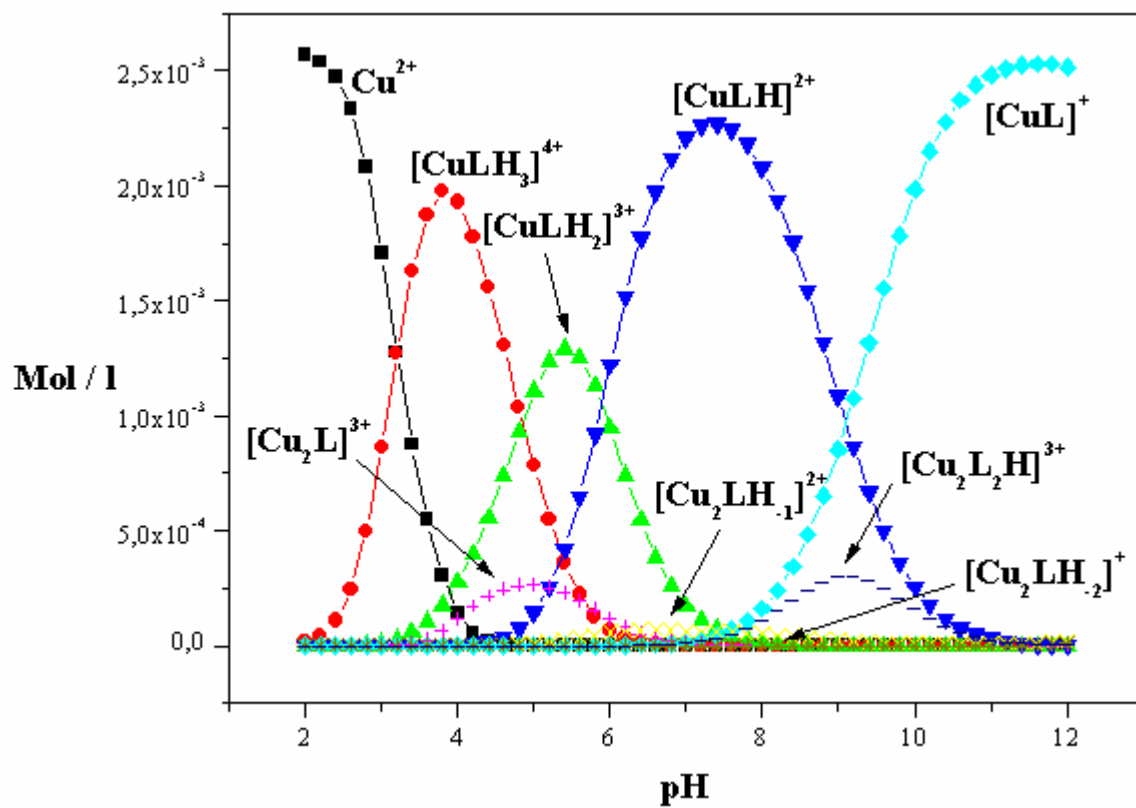
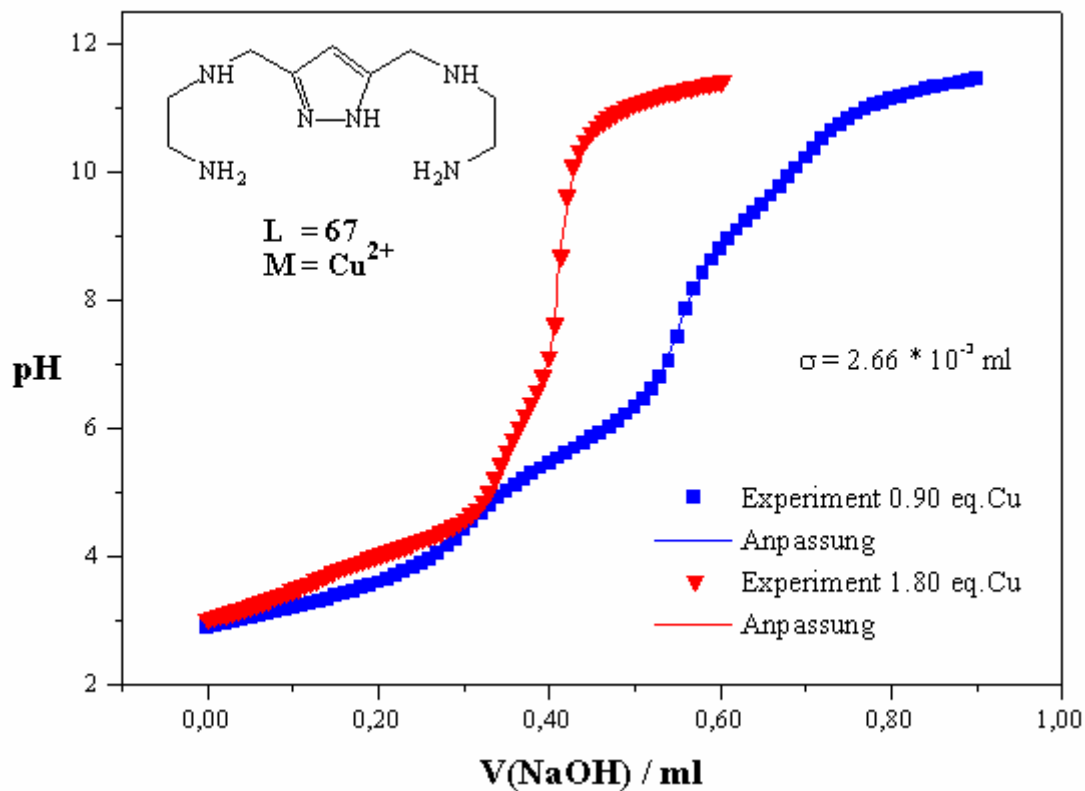
Titration curve (top) and species distribution (below) of ligand **32**, ( $[\text{L}] = 2.79 \cdot 10^{-3} \text{ M}$ ).



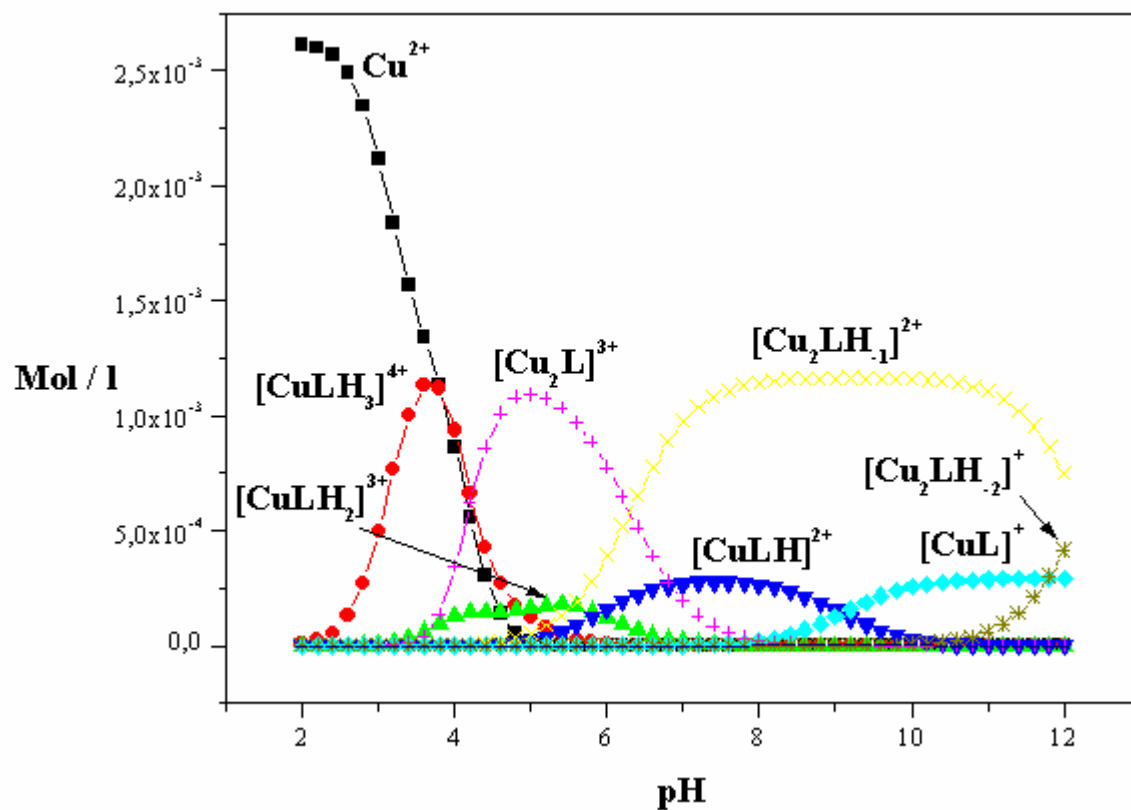
Titration curve (top) and species distribution (below) of ligand **31**,  $[\text{L}] = 3.0 \cdot 10^{-3} \text{ M}$ .



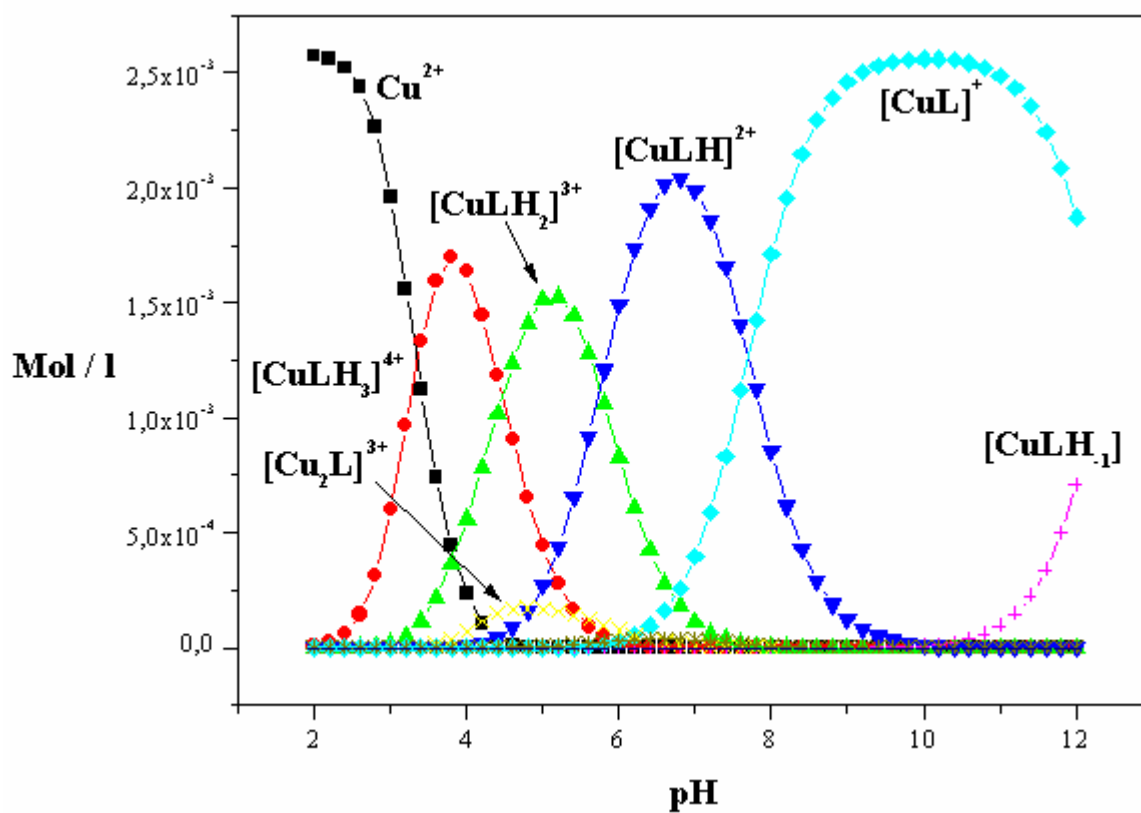
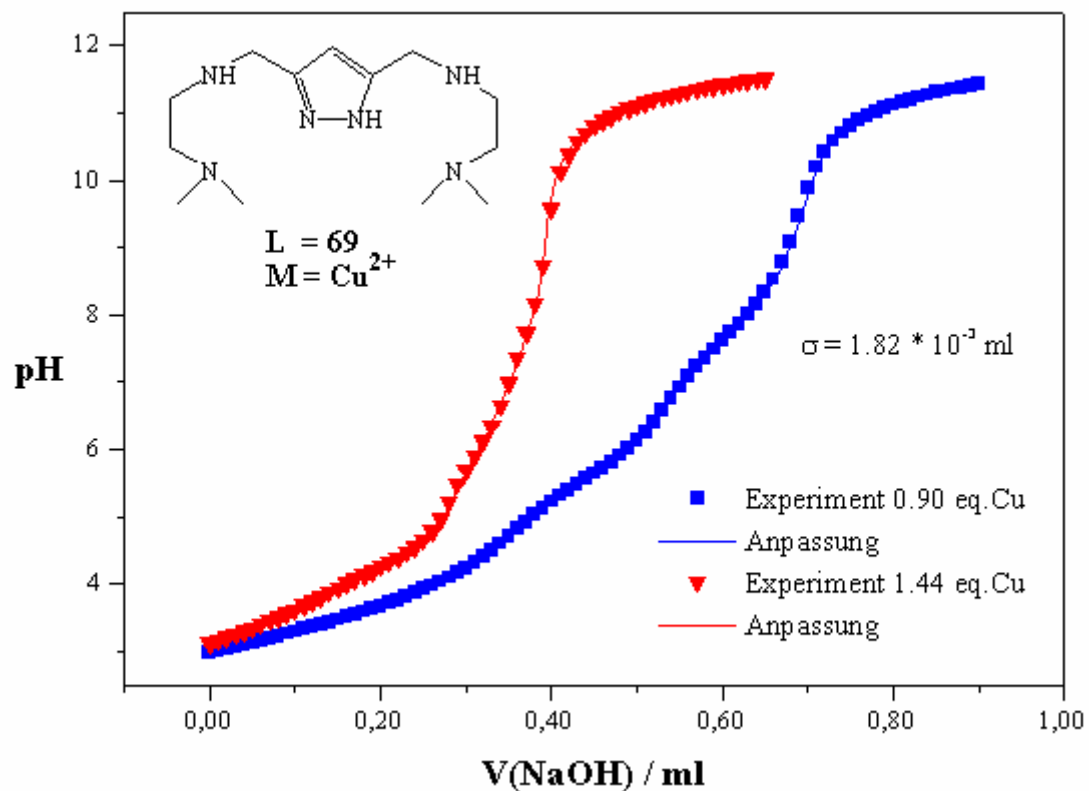
Titration curve (top) and species distribution (below) of ligand **26**,  $[L] = 3.0 \cdot 10^{-3} \text{ M}$ .



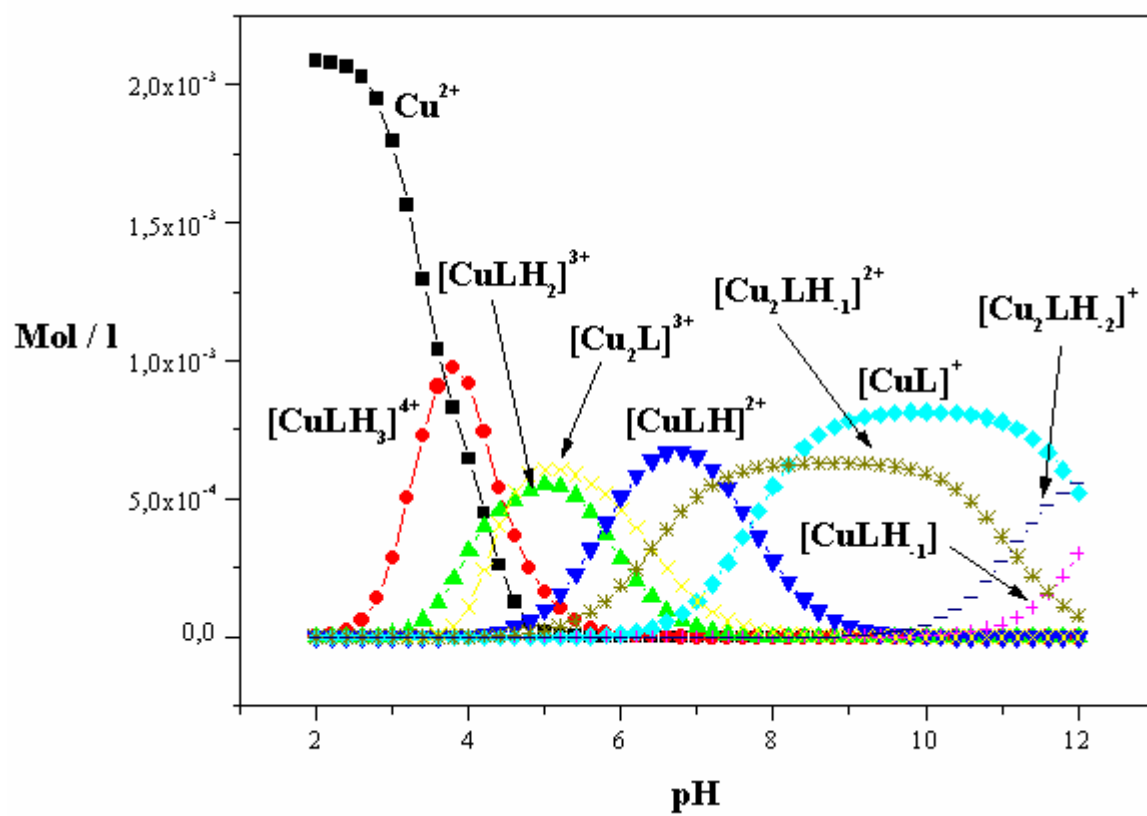
Titration curves (top) and species distribution (below) for the complexes of **19** for  $[L] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$ .



Species distribution for the complexes of **19** for  $[\text{L}] = 1.5 \cdot 10^{-3}$  M and  $[\text{M}] = 2.7 \cdot 10^{-3}$  M.

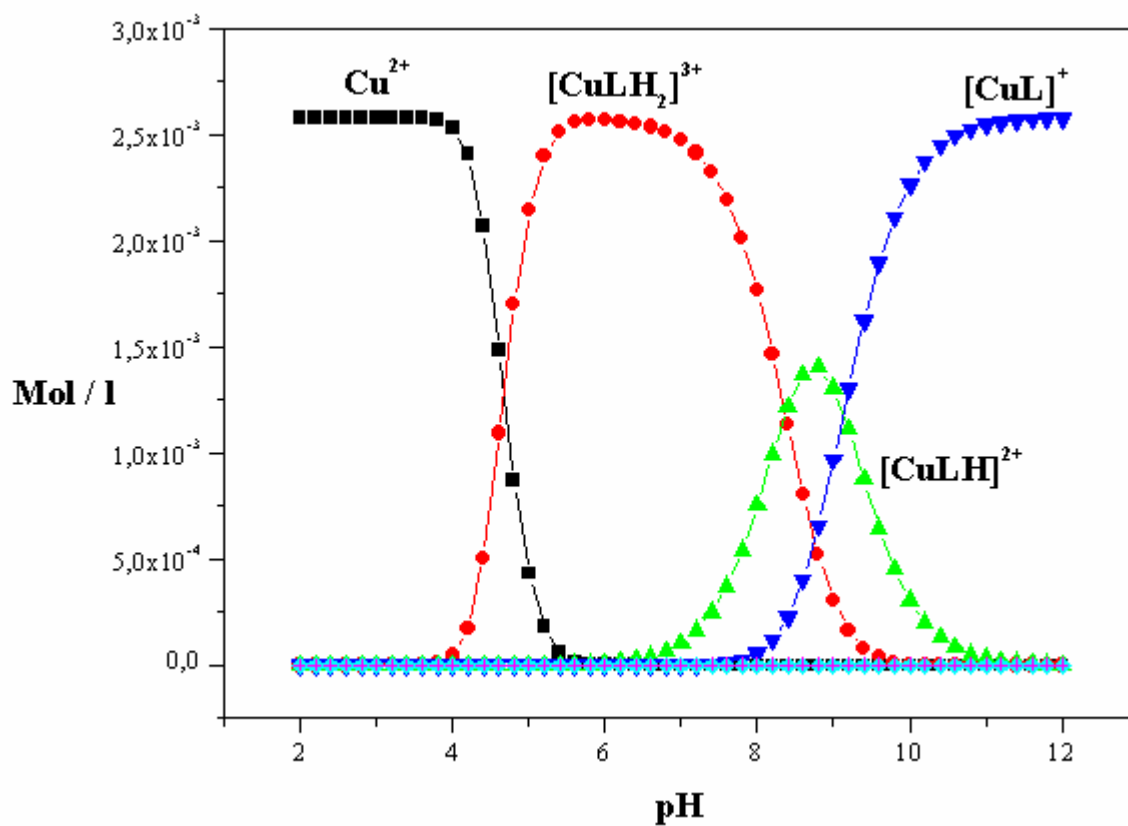
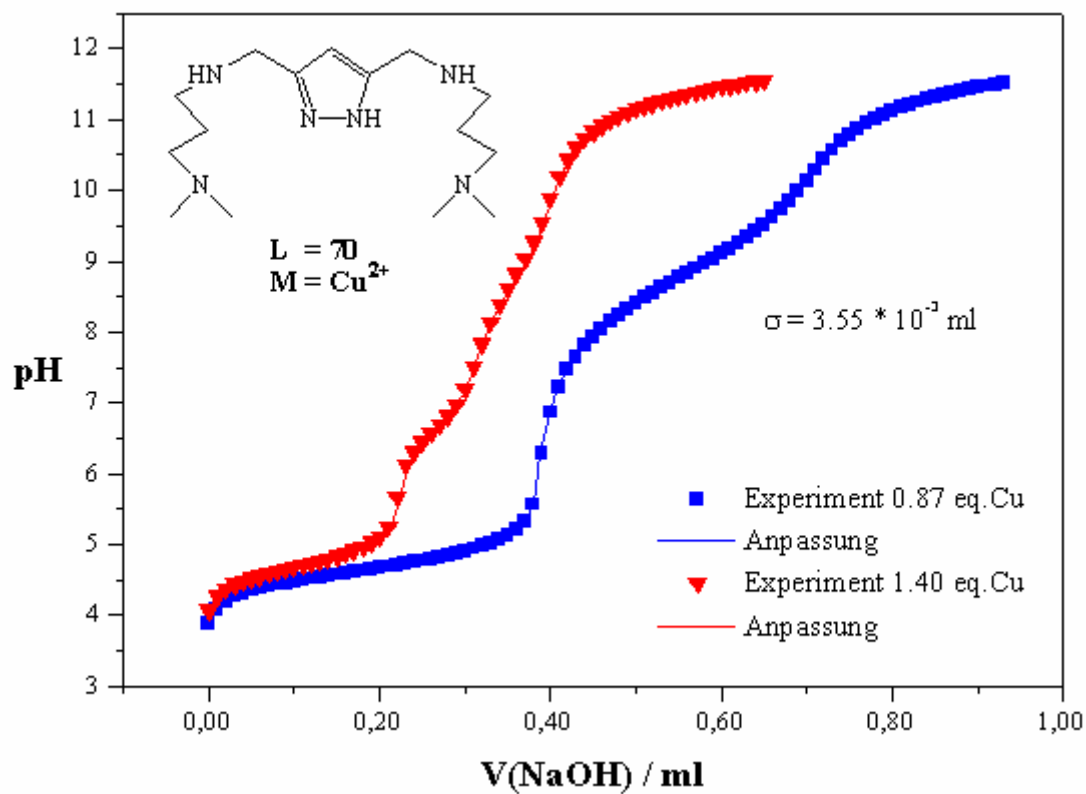


Titration curves (top) and species distribution (below) for the complexes of **16** for  $[L] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$ .

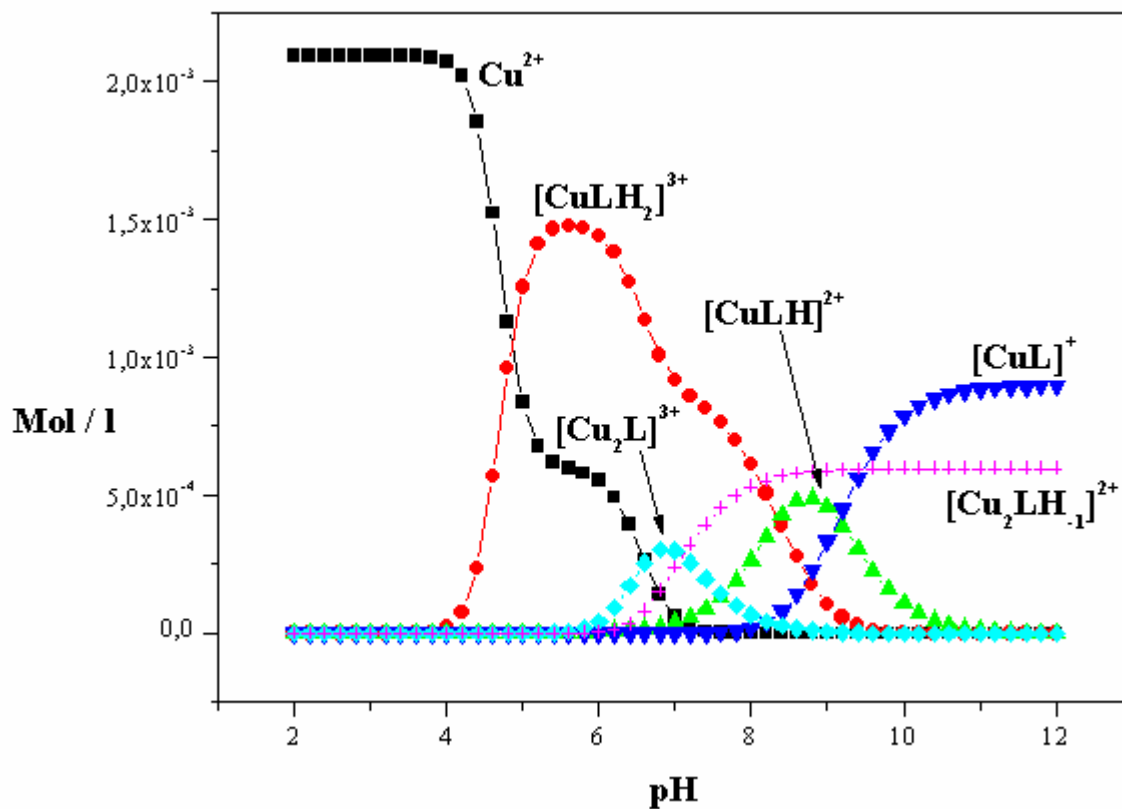


Species distribution for the complexes of **16** for  $[\text{L}] = 1.5 \cdot 10^{-3}$  M and  $[\text{M}] = 2.16 \cdot 10^{-3}$  M.

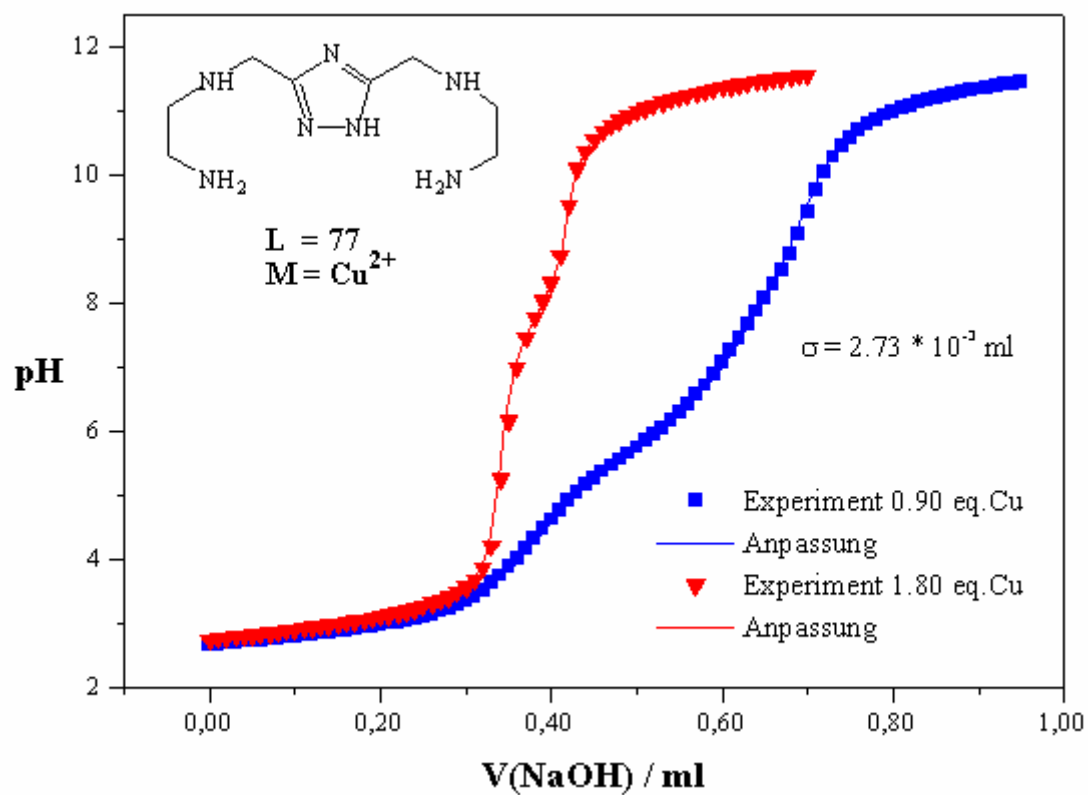




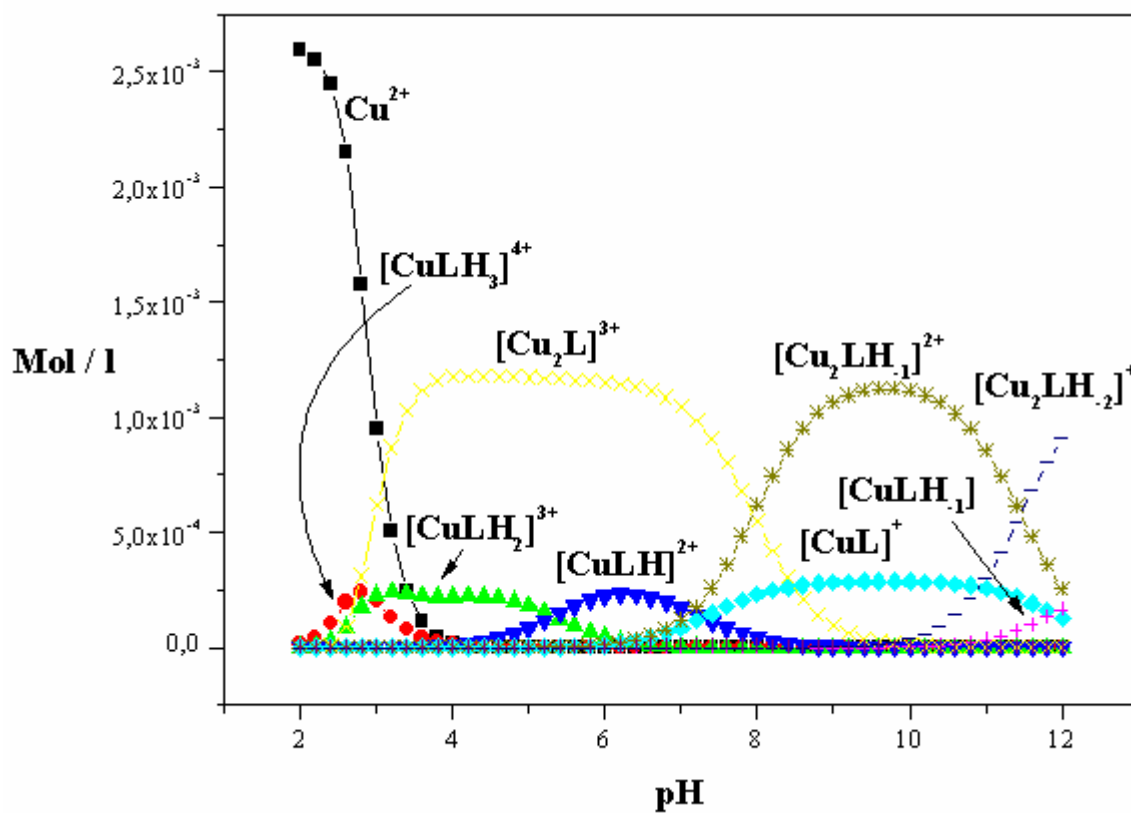
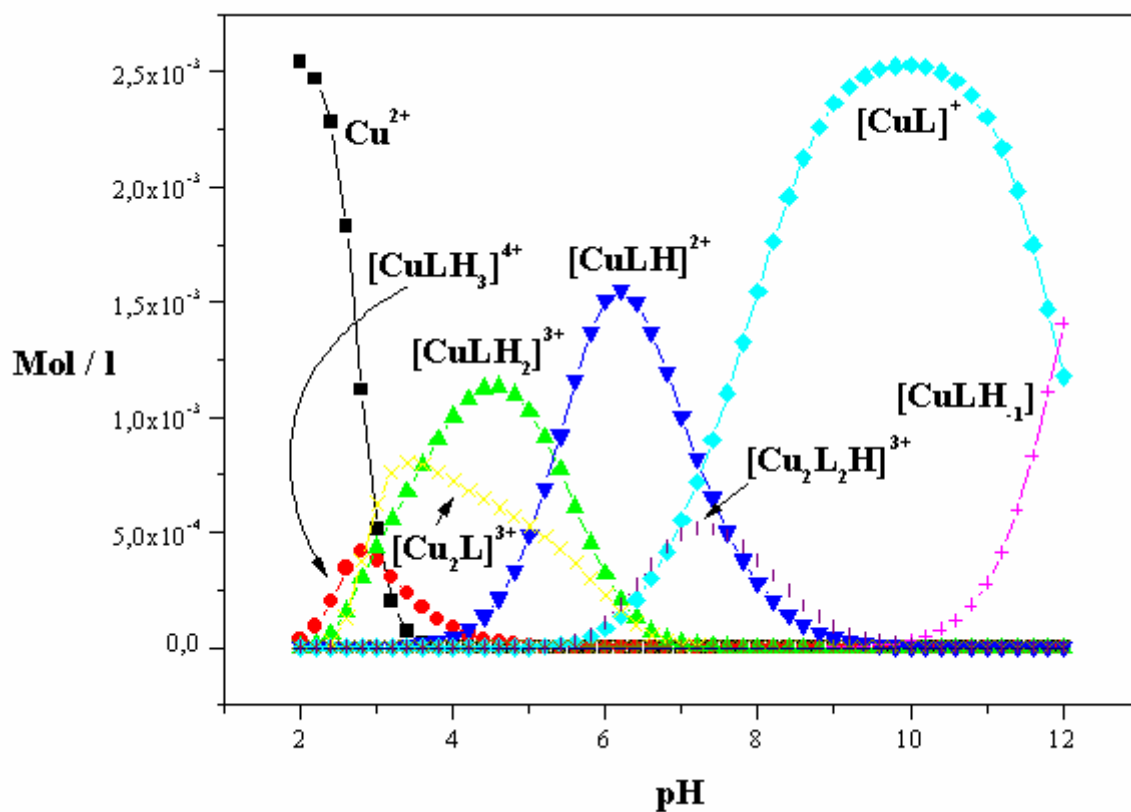
Titration curves (top) and species distribution (below) for the complexes of **17** for  $[L] = 3.08 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$ .



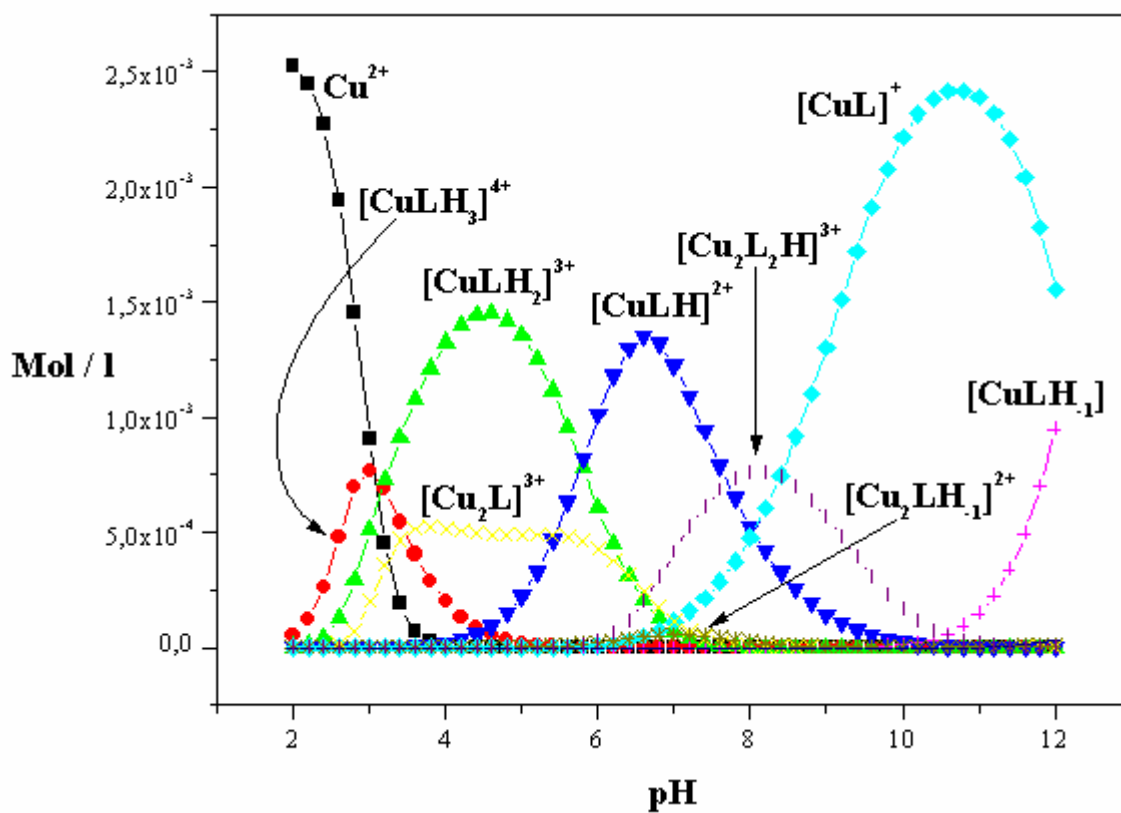
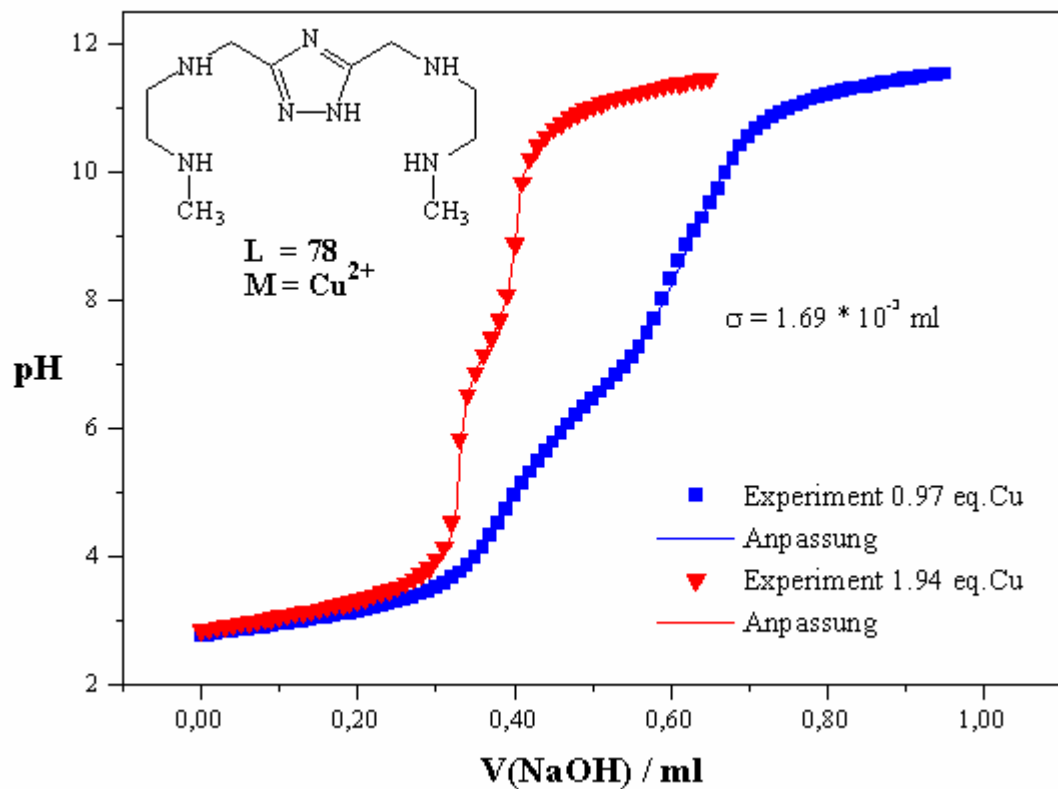
Species distribution for the complexes of 17 for  $[L] = 1.54 \cdot 10^{-3}$  M and  $[M] = 2.16 \cdot 10^{-3}$  M.



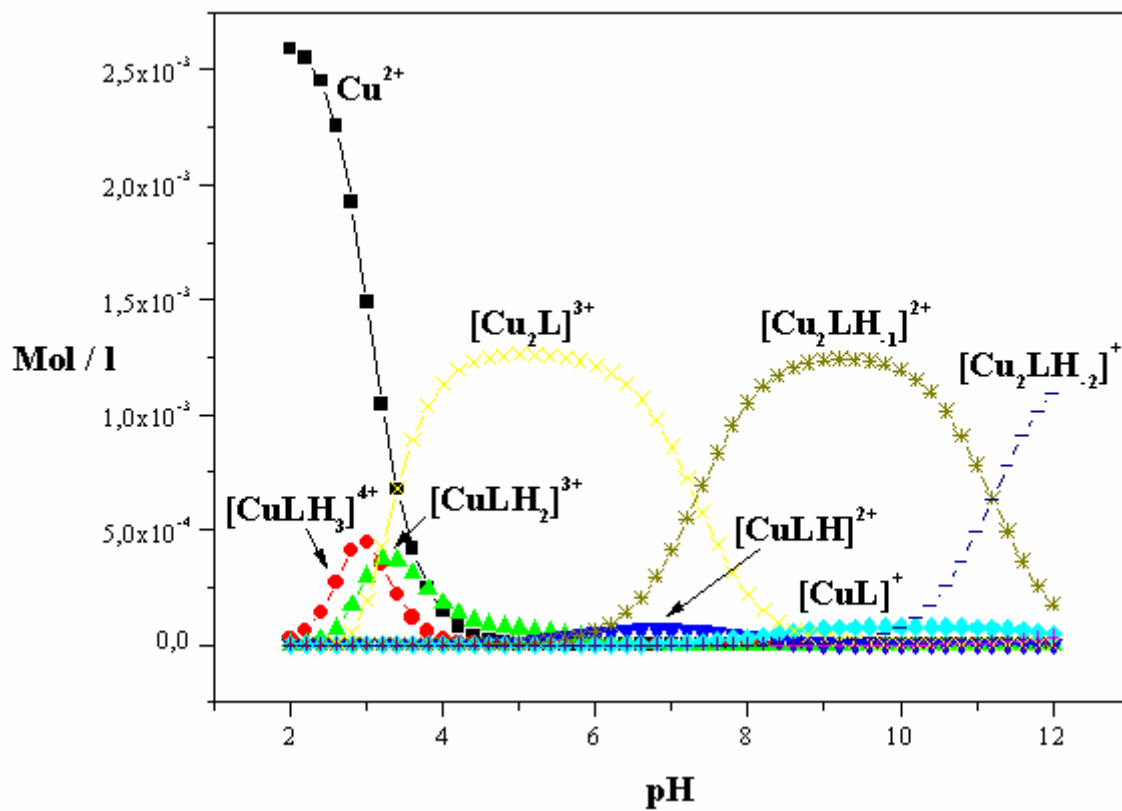
Titration curves of the complexes of ligand 33.



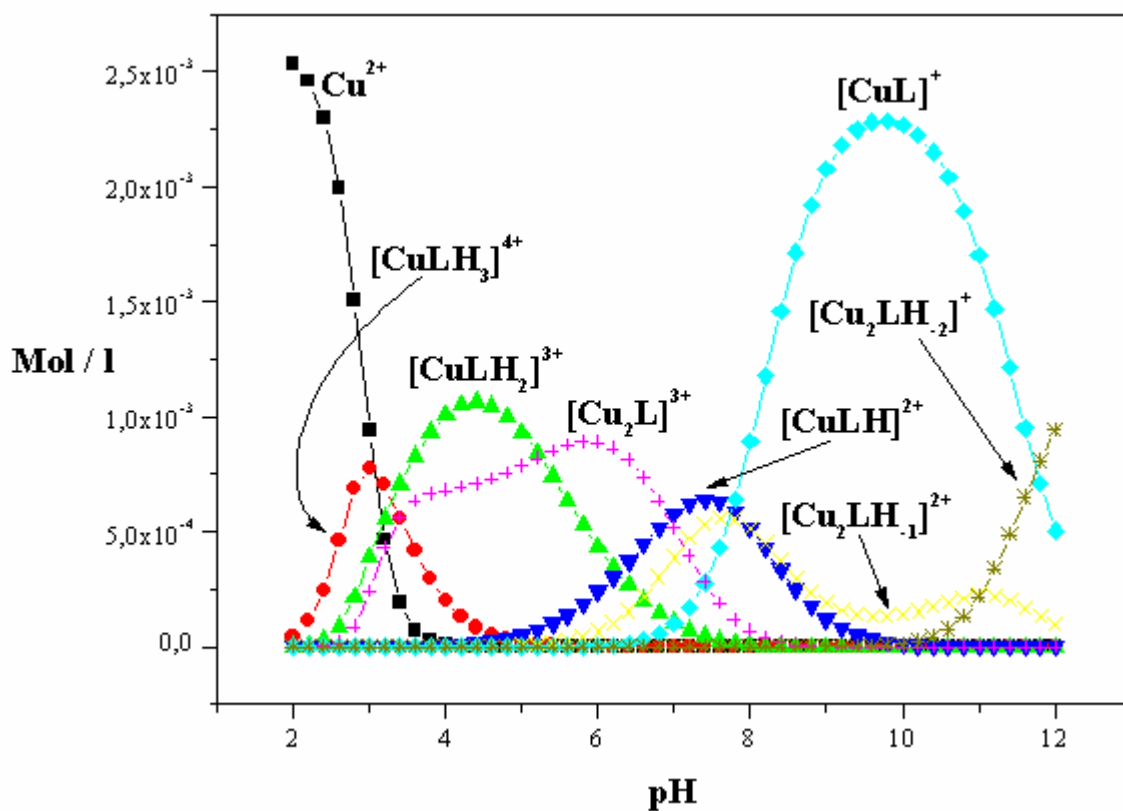
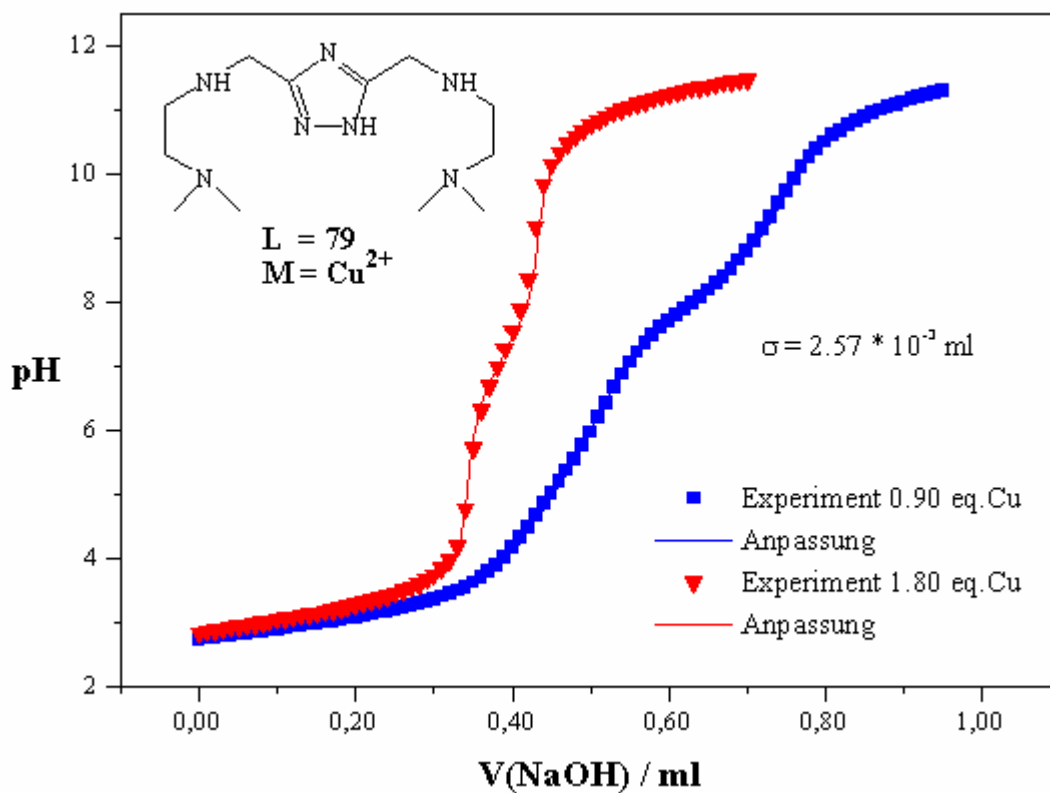
Species distribution for the complexes of **33** for  $[L] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$  (top) and for  $[L] = 1.5 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$  (below).



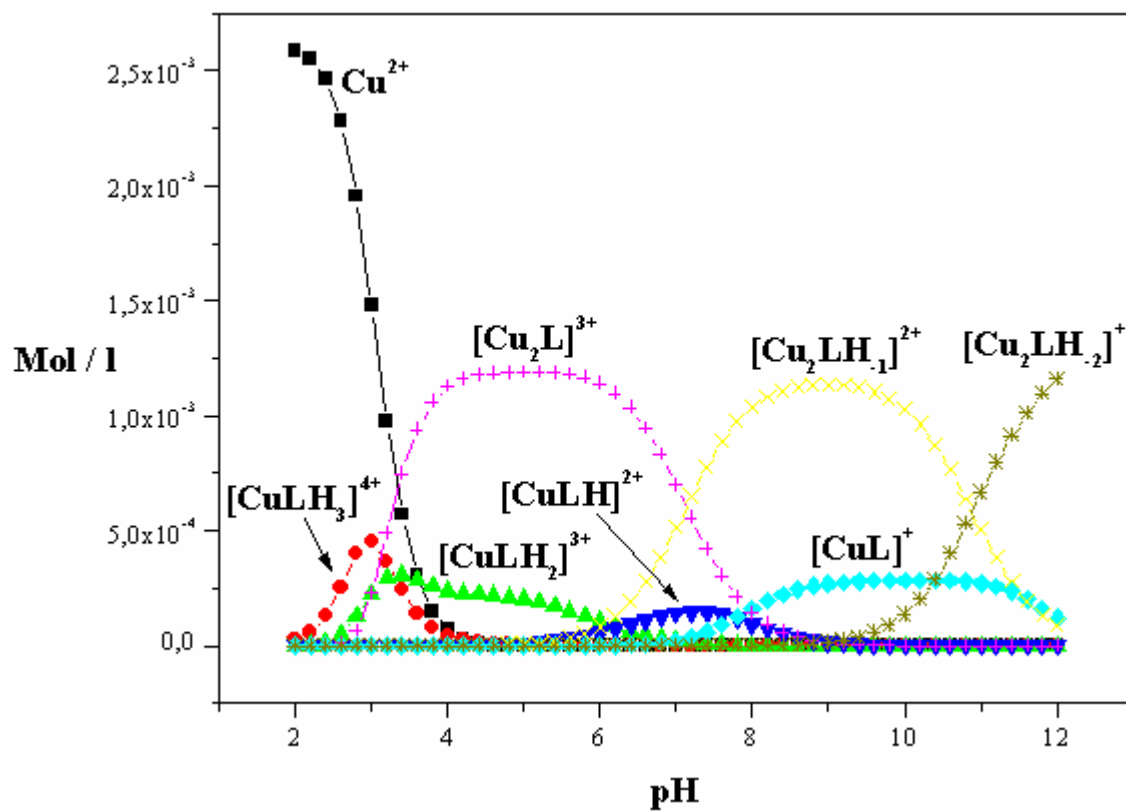
Titration curves (top) and species distribution (below) for the complexes of **32** for  $[L] = 2.79 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$ .



Species distribution for the complexes of **32** for  $[\text{L}] = 1.39 \cdot 10^{-3}$  M and  $[\text{M}] = 2.70 \cdot 10^{-3}$  M.

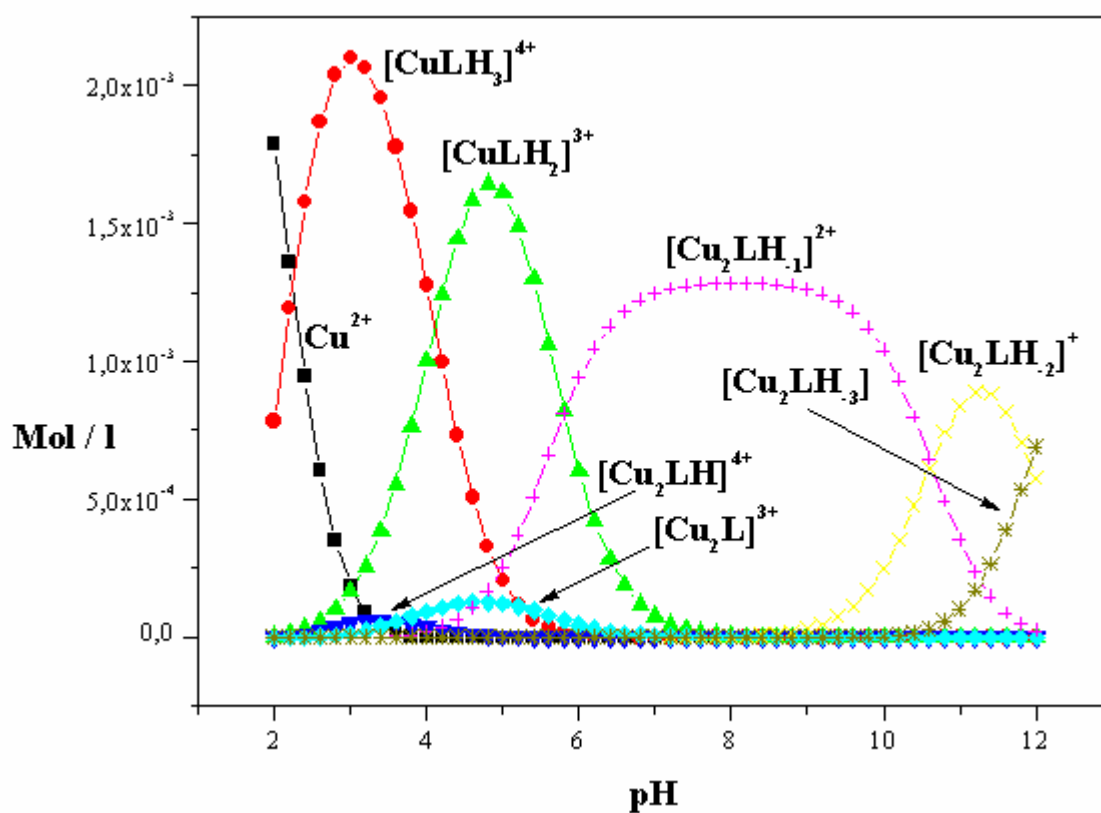
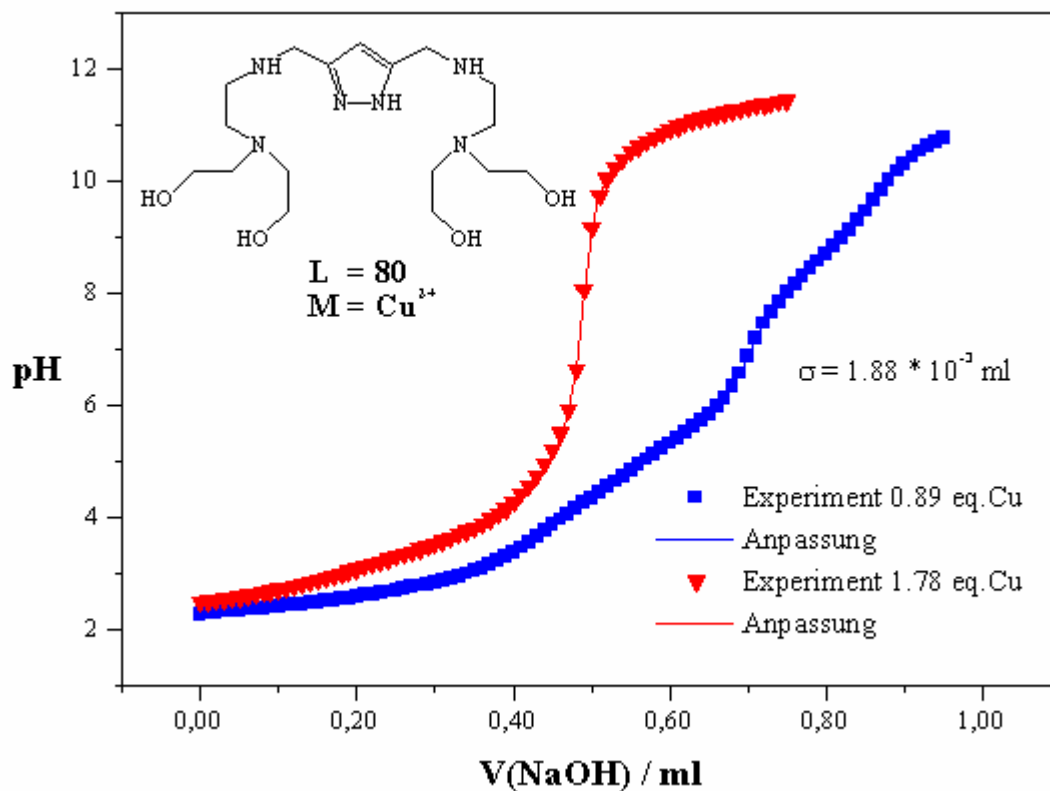


Titration curves (top) and species distribution (below) for the complexes of **31** for  $[\text{L}] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[\text{M}] = 2.7 \cdot 10^{-3} \text{ M}$ .

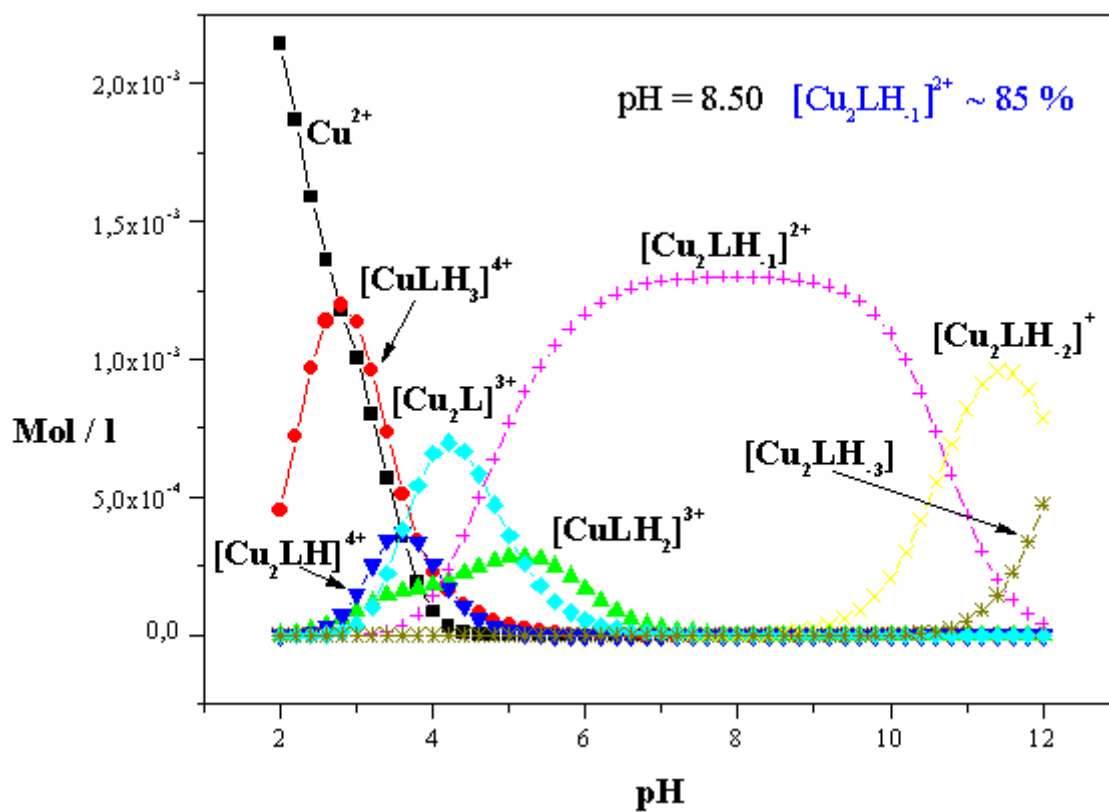


Species distribution for the complexes of **31** for  $[\text{L}] = 1.5 \cdot 10^{-3}$  M and  $[\text{M}] = 2.7 \cdot 10^{-3}$  M.

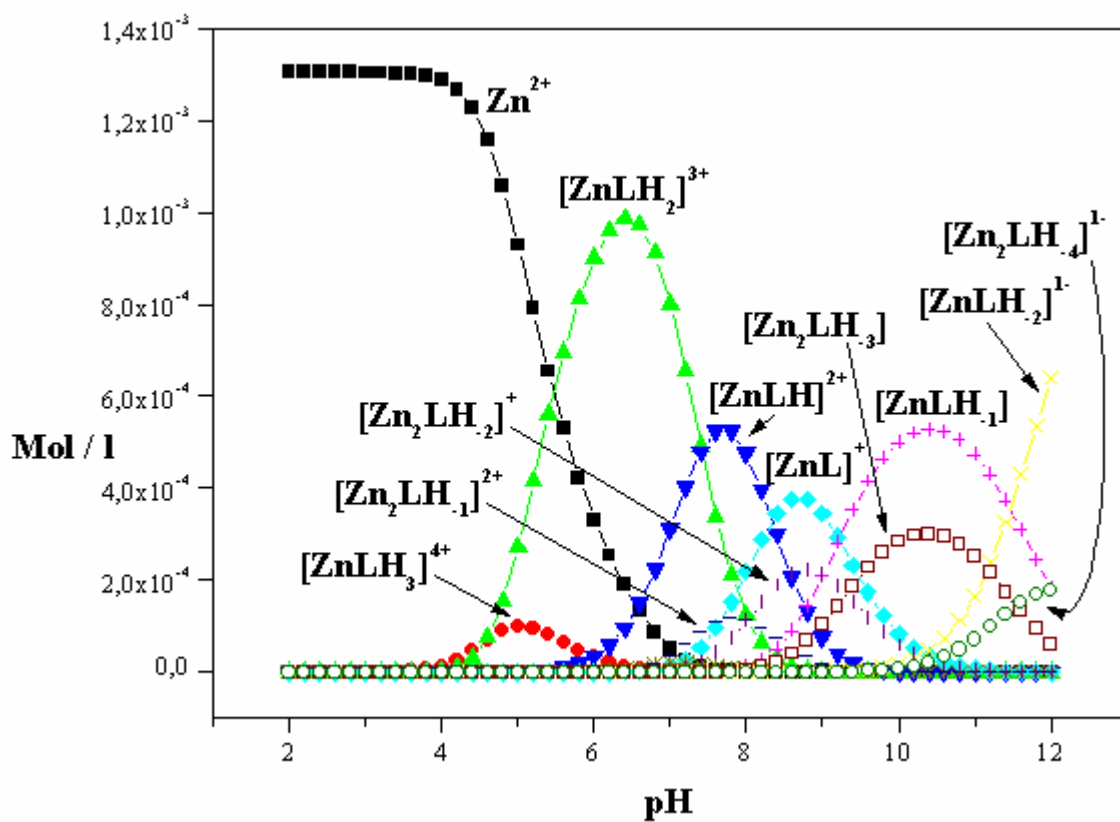
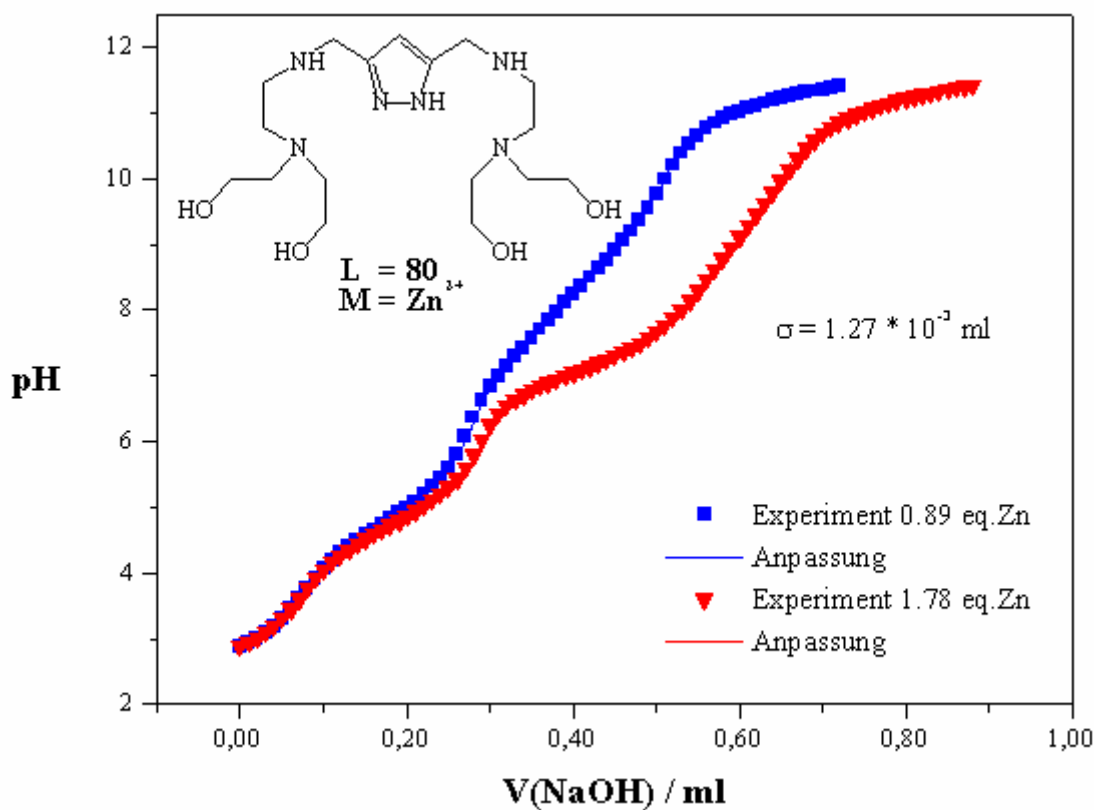




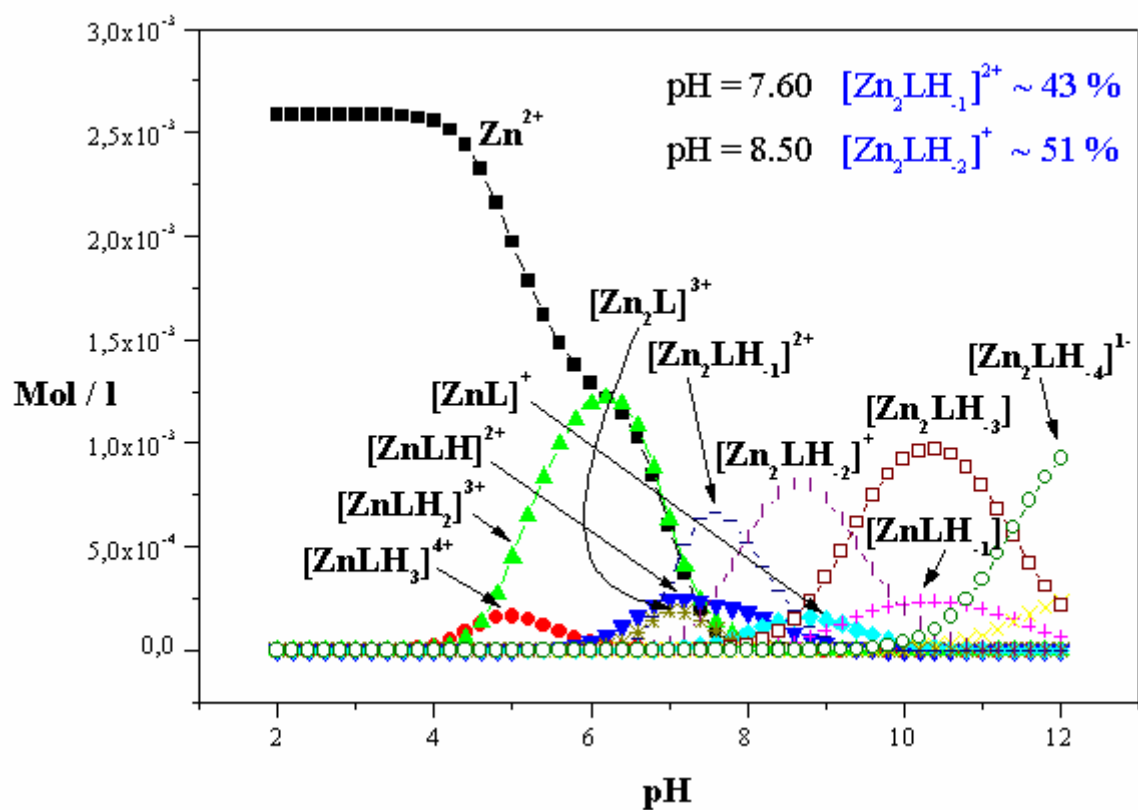
Titration curves (top) and species distribution (below) for the complexes of **26** for  $[\text{L}] = 3.04 \cdot 10^{-3} \text{ M}$  and  $[\text{M}] = 2.70 \cdot 10^{-3} \text{ M}$ .



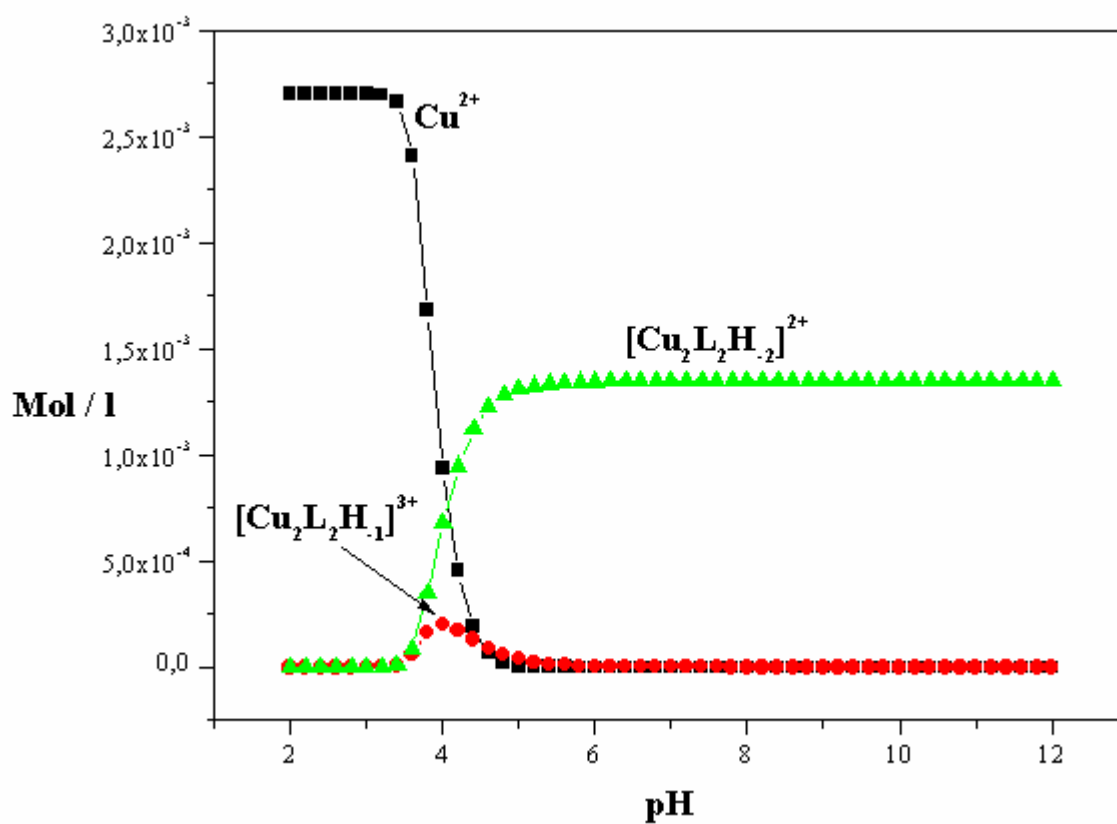
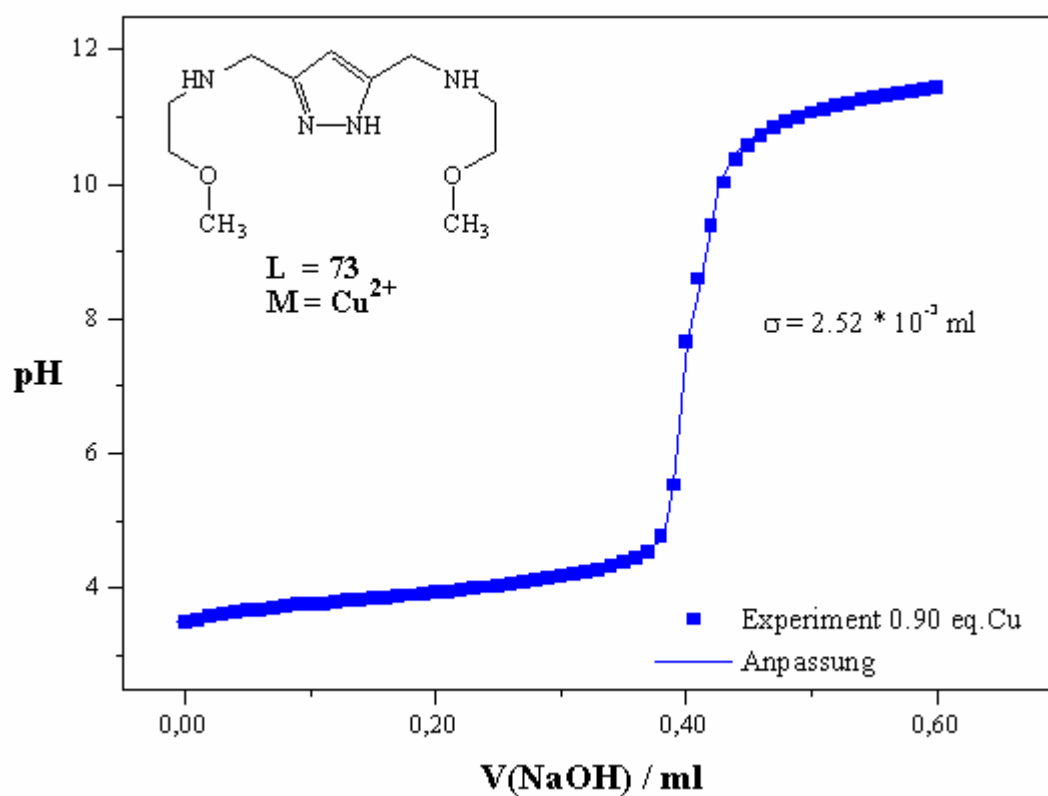
Species distribution for the complexes of **26** for  $[\text{L}] = 1.52 \cdot 10^{-3}$  M and  $[\text{M}] = 2.70 \cdot 10^{-3}$  M.



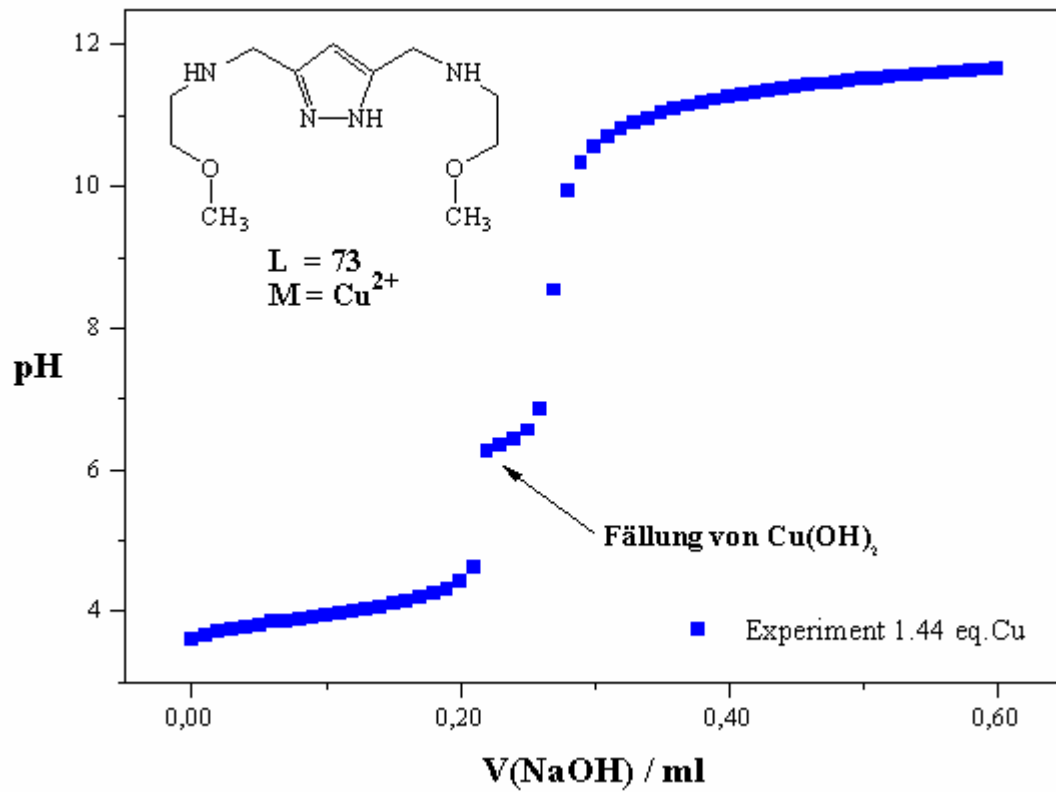
Titration curves (top) and species distribution (below) for the complexes of **26** with  $\text{Zn}^{2+}$  for  $[\text{L}] = 1.52 \cdot 10^{-3} \text{ M}$  and  $[\text{M}] = 1.35 \cdot 10^{-3} \text{ M}$ .



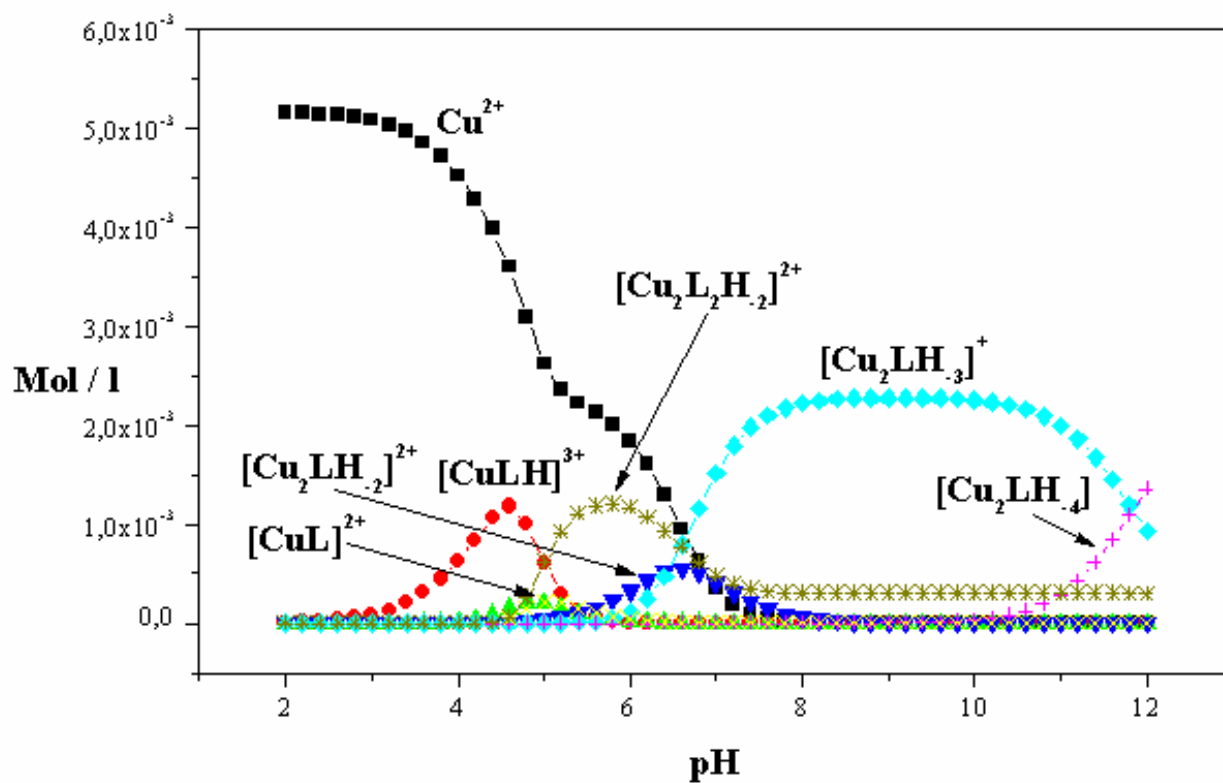
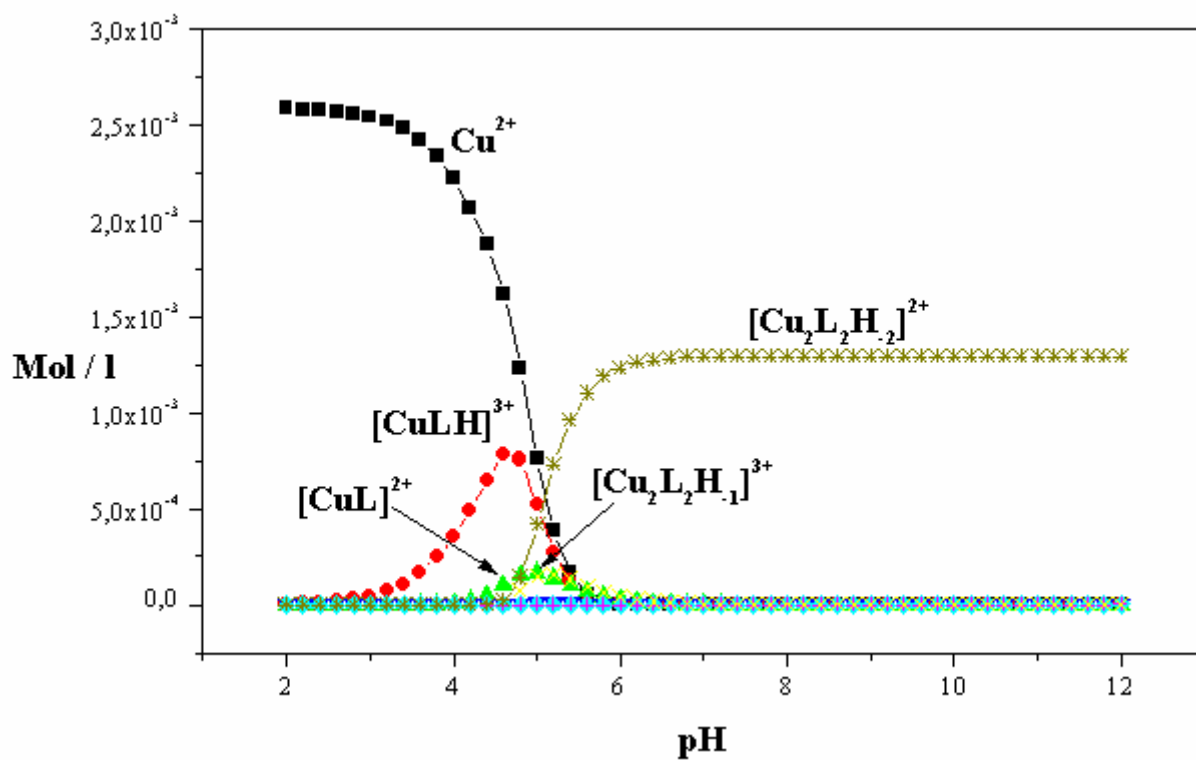
Species distribution for the complexes of **26** with  $\text{Zn}^{2+}$  for  $[\text{L}] = 1.52 \cdot 10^{-3} \text{ M}$  and  $[\text{M}] = 2.70 \cdot 10^{-3} \text{ M}$ .



Titration curve (top) and species distribution (below) for the complexes of **20** for  $[L] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$ .



Titration curve of the complex of ligand **20** for  $[L] = 1.5 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.16 \cdot 10^{-3} \text{ M}$ .



Species distribution for the complexes of **23** for  $[L] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[M] = 2.7 \cdot 10^{-3} \text{ M}$  (top) and  $[L] = 3.0 \cdot 10^{-3} \text{ M}$  and  $[M] = 5.4 \cdot 10^{-3} \text{ M}$  (below).